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ST. FRANCIS RIVER AND TRIBUTARIES PROJECTS

(ARKANSAS)

MISSISSIPPI RIVER AND TRIBUTARIES



UNITED STATES DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE
Little Rock, Arkansas



ST. FRANCIS RIVER AND TRIBUTARIES (ARKANSAS)

MISSISSIPPI RIVER AND TRIBUTARIES PROJECT STUDY

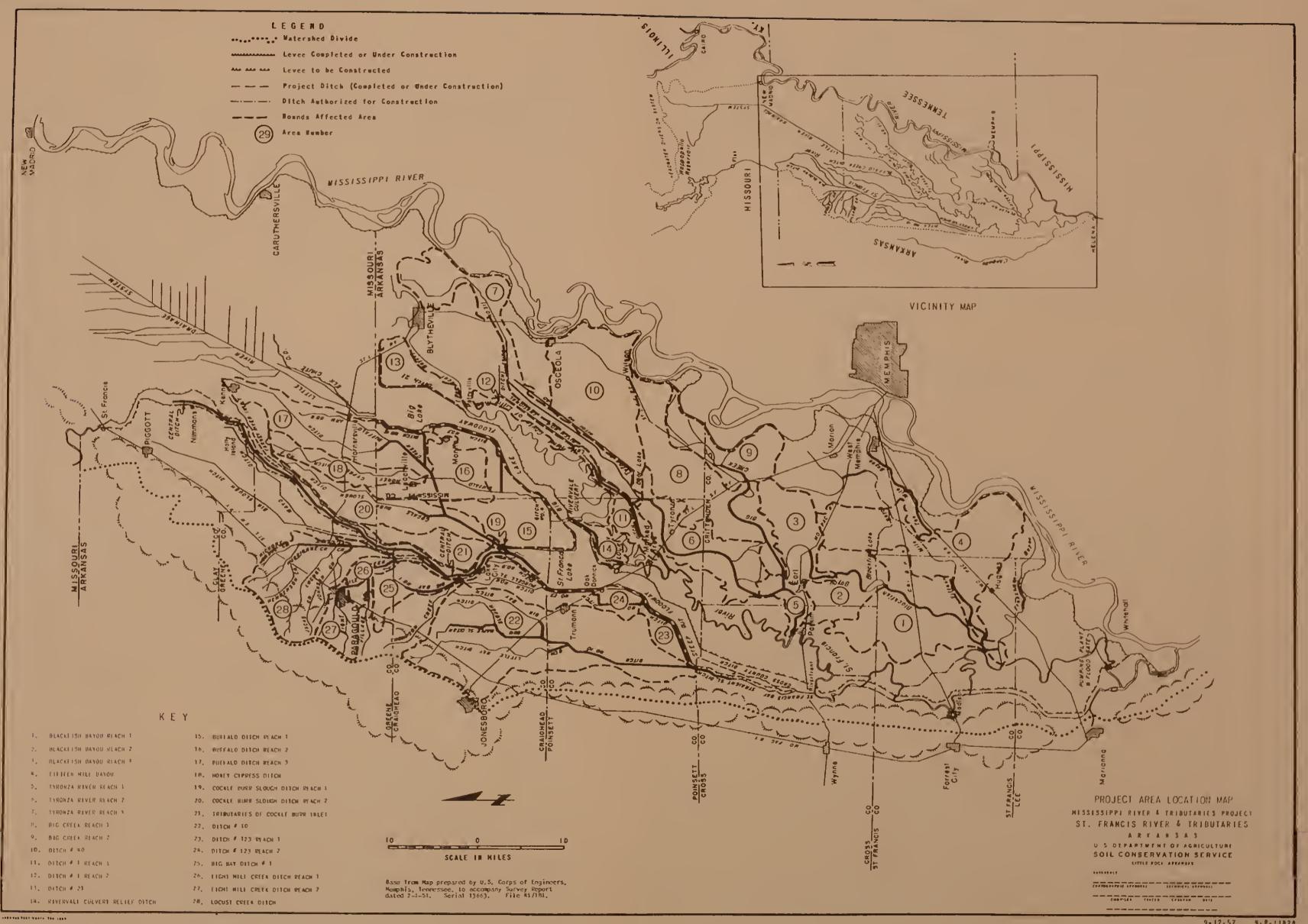
REPORT ON

FRESHMT AND ANTICIPATED AGRICULTURAL CONDITIONS

Prepared by The U. S. Department of Agriculture for the Mississippi River Commission

Soil Conservation Service Little Rock, Arkansas December, 1957 .

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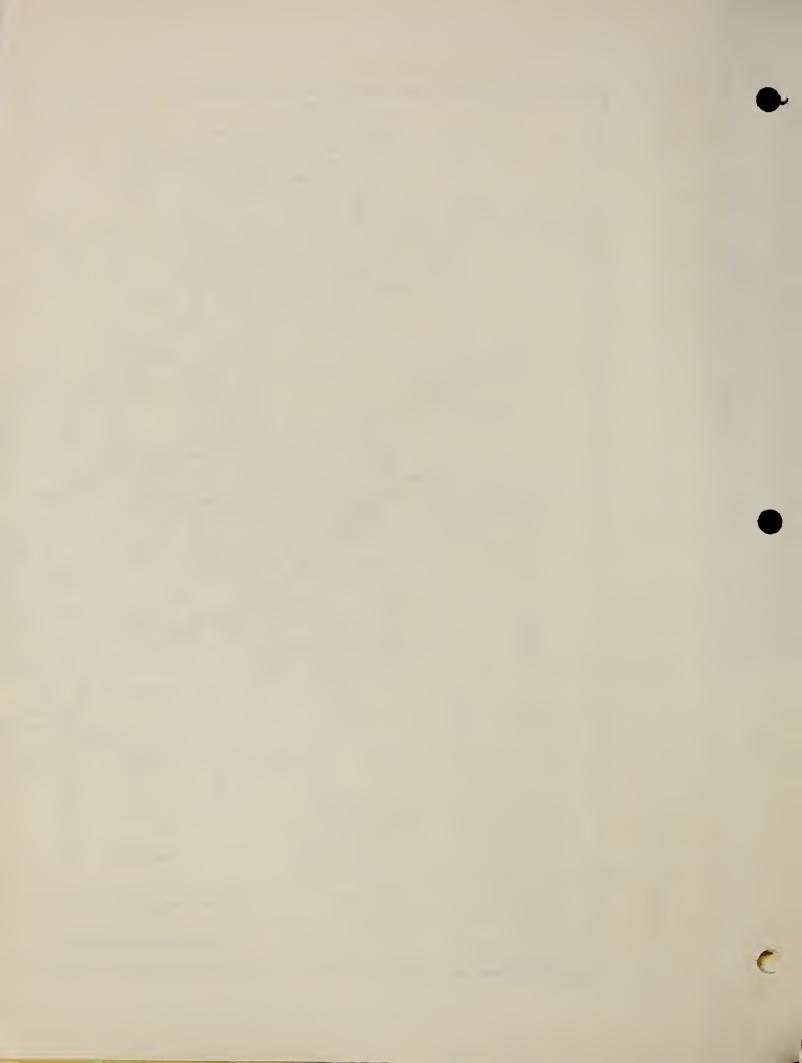
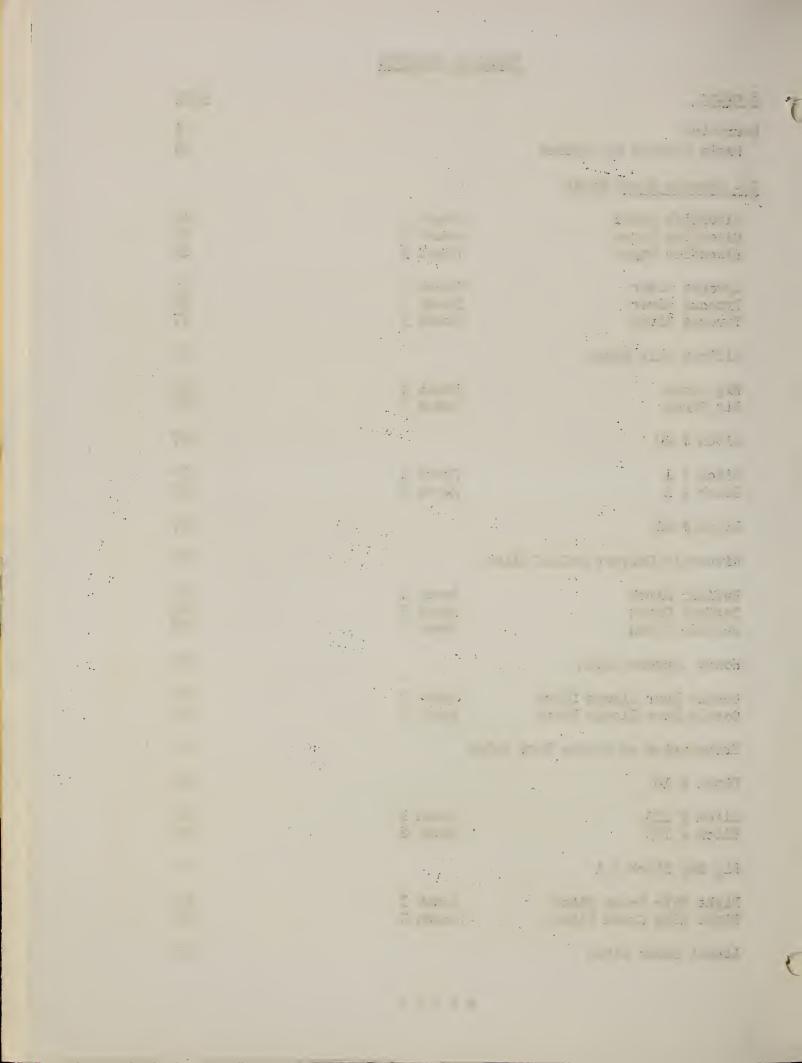


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AUTHORITY

This report has been prepared by the Soil Conservation Service, U. S. Department of Agriculture, covering studies made under Section 6, Public Law 566, 83d Congress and upon request of the Mississippi River Commission. Specific request to initiate this particular project area study was made October 22, 1956, by the District Engineer, Memphis District, Corps of Engineers, Department of the Army. The basis for study was agreed on as set forth in the Project Study Statement, dated February 5, 1957.

AGENCY PARTICIPATION AND RESPONSIBILITIES

Material contained herein is based upon the data at hand and the combined judgment of available agricultural technicians most familiar with the project area and its agricultural conditions and problems. Under a U. S. Department of Agriculture Memorandum of Understanding, consumated February 2, 1956, the U. S. Forest Service, the Agricultural Research Service, and the Soil Conservation Service have each participated in the study. From time to time assistance of other persons, such as representatives of the Agricultural Extension Service, State College of the Agriculture and Experiment Stations, and other agencies, has been given.

The Agricultural Research Service has been responsible for developing field crop and livestock commodity price data, field crop and livestock enterprise production cost data, interest rates for capitalization, amortization and discounting, and has assisted the Soil Conservation Service in studies of field crop and pasture yields and in overall economic procedures.

All woodland yields, values and costs were developed by the Forest Service.

The Soil Conservation Service, through the office of the Arkansas State Conservationist, has in general been responsible for coordinating and conducting the study and preparing this report. It has classified the soils of the area in accordance with the major soil groupings. It has estimated land use and cropping patterns, extent and cost of land use conversions, and extent and cost of farm and group drainage systems.

METHOD OF COMPUTING AGRICULTURAL VALUES CREDITABLE TO PROJECT

Data presented in this report are intended to portray three different situations with respect to land use, cropping patterns, crop yield, etc. - (1) the current situation, (2) the future situation without the proposed project, and (3) future conditions with the proposed project. The basis for computing agricultural benefits in this report is the difference between the second and third situation listed. The major reason for this type of calculation is that it provides a systematic means of excluding non-project influences which are expected

whether a project is installed or not. Because of current land development operations and expected changes in commodity price and price-cost relationships, for example, future land use and cropping systems without the project may be quite different than present. This difference is not credited to the project.

LIMITS OF APPLICATION OF ESTIMATES

The estimates cover an appraisal of the agricultural values and costs that can be expected as a result of agricultural drainage in association with installation of the proposed project works. However, the data includes no estimates of flood damage reduction, its values or costs, though the land use and cropping estimates reflect the flood protection that would be afforded by the proposed project works. Average flood-free yield estimates have been used throughout the study so that they can be used as a basis for calculation of flood damage reduction by the Corps of Engineers, based upon its own hydrologic studies. The Department of Agriculture, having made no hydrologic studies of its own in the area, has developed estimates on the basis of hydrologic data provided by the Corps of Engineers, including the delineation of limits of project effectiveness, and maximum overflow that established the conditions for project study. Further studies may result in revised hydrologic data that would require modification of the agricultural data contained herein.

The limits of project effectiveness established by the Corps of Engineers on the basis of engineering studies were accepted as the basis for compilation of agricultural data. All soils of such characteristics as to not require drainage have been eliminated from drainage evaluations. However, no attempt has been made by the Department of Agriculture to designate areas, within the limit of project effectiveness provided by the Corps, which because of elevation might be drained without the project and hence not properly credited as benefiting from the project. Further engineering studies by the Corps may reveal the desirability of eliminating some acreages of that type from the computations contained herein. The Department of Agriculture does not have responsibility for that phase of the study.

DESCRIPTION OF THE PROJECT

The St. Francis River and Tributaries (Arkansas) Project consists of cleanout, enlargement and realignment for seventeen St. Francis River tributaries having outlets in Arkansas, except in the Pettyville sub-area where the proposed improvement consists of a pumping station. These tributary drainage areas are itemized as follows:

| | :Number | : Acre | : es | |
|------------------------------------|---------|---------------|-----------------------|----------------------------|
| Tributary | | | ne B :Zone C | Total |
| (1) Blackfish Bayou | : 3 | 71,853: 31 | 1,511:1,596 | 104,960 |
| (2) Fifteen Mile Bayou | : 1 | 99,424 1 | 1,536:1,640 | 105,600 |
| (3) Tyronza River | : 3 | 94,969: 32 | 2,391: - | 127,360 |
| (4) Big Creek | : 2 | 108,646: 15 | 5,514: - | 124,160 |
| (5) Ditch # 40 | : 1 | 105,702 | 1,818: - | 107,520 |
| (6) Ditch # 1 | : 2 | 17,568: 6 | 6,752: - | 24,320 |
| (7) Ditch # 21 | : 1 | 10,528: 1 | 3,792: - | 24,320 |
| (8) Rivervale Culvert Relief Ditch | 1: 1 | 12,160 | | 12,160 |
| (9) Buffalo Ditch | : 3 | 128,608: 40 | 0,352: - | 168,960 |
| (10) Honey Cypress Ditch | : 1 | 25,555 | 1,325 - | 26 ₉ 880 |
| (11) Cockle Burr Slough Ditch | : 2 | 45,004 | 2,815: 181 | 48,000 |
| (12) Tribs of Cockle Burr Inlet | : 1 | 20,198 | 3,482: - | 23 ₀ 680 |
| (13) Ditch # 10 | : 1 | 108,268: 4 | 0,212: - | 148,480 |
| (14) Ditch #123 | 2 | 29,229: 2 | 1,331: - | 50,560 |
| (15) Big Bay Ditch # 1 | : 1 | 46,682 | 678: - | 47,360 |
| (16) Eight Mile Creek Ditch | 2 | 35,315 | 4,365: - | 39,680 |
| (17) Locust Creek Ditch | 1 | 62,816 | 6,304: - | 69,120 |
| TOTAL | 28 | :1,022,525:22 | ; 7,178:3,417 : | :1,253,120 |

No federal construction has been done on any of the sub-areas to be studied except on Tyronza River, where channel improvement, including a cut-off, was performed during 1939 and 1940 from mile 15 upstream to a point about 1.2 miles above U. S. highway 63.

The purpose of project improvements is to furnish major drainage outlets to serve agricultural drainage within the drainage areas of the St. Francis River tributaries studied and reported in this document, consisting of 1,253,120 acres, and to provide alleviation of flooding that

affects 230,595 acres.

For the purpose of this study, the St. Francis River levees and associated interior drainage facilities, the authorized pumping plant and floodgate near the mouth of St. Francis River, the St. Francis River Channel Improvement (authorized and under construction), and the St. Francis Bay and Straight Slough ditch were considered to be in place for the "Future Without Project" conditions.

The proposed facilities are designed to serve as major outlets for farm and group drainage systems for a total area of 1,253,120 acres in Northeastern Arkansas and, the southwest part of the "bootheel" of Missouri. The area has been divided into three zones of overflow hazards, based upon boundaries, elevations, and acreage tabulations as furnished by the Corps of Engineers. An area of 1,022,525 acres (zone A) lies above limits of overflow. An area of 227,178 acres (zone B) is affected by flooding that can be alleviated by project works to an extent that will improve agriculture; this area is that from the experienced 1950 flood line as modified by that portion of the authorized project not then constructed, to the one-in-three-year flood line. An additional area of 3,417 acres (zone C) lies below the elevation of three-year flooding frequency, and is subject to flooding of such frequency as to preclude further agricultural development as a result of project in-stallation.

This project is essentially agricultural in nature, Agricultural benefits that could accrue to the project would be almost entirely from improvement in farm and group drainage systems and associated technology. Without these associated facilities only meager agricultural benefits could accrue to the project. The proposed improvements are integral parts of the farm and group drainage systems.

The project area is typical of the farming area of Eastern Arkansas and southeastern Missouri insofar as soils and cropping systems are concerned. General farming predominates; cotton, rice, soybeans and livestock feed crop production are the major enterprises. The area as a whole differs markedly from the rest of the Eastern Arkansas alluvial area, in that it has attained a fairly high level of development. It is estimated that about 80 to 90 percent of the land area is in farm operating units of 280 acres or more, and this condition is anticipated to exist in the future situation. Because of the somewhat higher elevations, the high proportion of sandy soils, nearness to population centers with good markets, etc., the area has developed rapidly and is expected to continue this trend as technology becomes available and feasable.

SOILS

The soils of that part of the St. Francis River Basin in Arkansas are composed, in the greater part, of alluvium from the Mississippi River and its Tributaries. A minor amount (about 6.8 percent) of the project area is of soils of the loess terrace, and an additional amount (about 5.1 percent) of the area is of soils of Crowley's Ridge.

Soils of Crowley's Ridge (soil mapping unit 158), comprising about 5.1 percent of the area studies, are above the zone of overflow and ere in no way effected by the project. They do have a bearing on the project, however, due to rapid runoff and relatively high rate of sediment production. The runoff and sediment increase the costs of farm and group drainage installation and maintenance by considerable amounts in those reaches of the project study having portions of Crowley's Ridge in their headwaters.

Approximately 13.1 percent of the project area is comprised of sandy loam and loamy sand soils (soil mapping units 11, 11SU, 12, 12SU). These are well drained soils normally requiring no drainage improvements, due to permeable structure and somewhat higher elevations than surrounding wet soils. These bottomland and low terrace soils are presently well developed agriculturally and yields are moderately high in average years under good management. Yields are drastically reduced on these soils in dry years, due to the soils! low water holding capacity.

Coarse textured poorly drained soils (soil mapping unit 16) comprise about 5.3 percent of the project area. These soils occur mostly in the north central part of the project area, and are of great importance locally. The coarse textured surface soils are underlain with heavy clays of alluvial origin; this heavy clay layer inhibits internal drainage, thus adversely affecting plant growth during wet seasons. These soils are inherently productive and high yields of adapted crops can be regularly obtained when adequate drainage systems are installed.

Sandy loams and silt loams predominate on about 27.5 percent of the area. They are usually underlain at varying depths by heavy clays of alluvial origin; surface soils are of both alluvial and aeolian origin,

These soils occupy low terrace positions (soil mapping units 4, 4SU, 7) in bottomland landscapes and upland positions (soil mapping units 9, 10) on the loess terrace. In the area studied, the low terrace group listed constitutes about 22.6 percent of the total area, and is of great importance. Soils in this group, particularly soil mapping unit 4, yield the highest production levels in the area when drained and properly managed. The silt loam soils of the loess terrace, comprising about 4.9 percent of the area, are particularly adapted to rice culture. These soils are poorly to moderately well drained and consequently are fairly highly developed agriculturally and have moderately high present production levels; however, these soils respond well to drainage improvement. All the soils in this group are confined to intermediate elevations in the landscape.

A minor amount, about 0.4 percent, of the project area is comprised of medium textured (sandy loam and silt loam) poorly drained bottomland soils (soil mapping unit 6). These soils differ from the medium textured group just above, in requiring more intensive drainage systems; and, from the fine textured group below, in having somewhat higher yield levels under comparable conditions.

Approximately 7.9 percent of the project area is composed of poorly drained clay soils intermingled with excessively drained sandy soils (soil mapping unit 3). These soils occur mostly in the north central part of the project area, and are closely associated with the soils of soil mapping unit 16. These soils are moderately well developed at present and are yielding at moderately high production levels. Because of flat topography, low elevations, and slow permeability of the clays, surface flooding and waterlogging tend to prevail during the early part of the growing season unless artificial drainage is provided. The soils are inherently productive and high yields of adapted crops can be regularly obtained under good management when surface water accumulations are rapidly removed.

The remainder of the project area, comprising approximately 40.7 percent of the total, is composed of poorly and somewhat poorly drained clay soils (soil mapping units 1, 1SU, 2, 2SU). These soils are presently moderately well developed agriculturally and are yielding moderate production levels. However, they contribute some of the highest production increments from drainage improvement. Because of the flat to depressed or undulating topography, during periods of excessive rainfall - usually several times each cropping season-surface flooding and waterlogging conditions prevail unless intensive farm and group drainage systems are provided. The soils are inherently productive and excellent yields of adapted crops can be regularly obtained when surface water accumulations are rapidly removed.

LAND USE

About 89 percent of the project area exclusive of Crowley's Ridge is open land, about 10 percent is wooded, with negligible amounts, about .5 percent each, of urban and watered areas. There is a much higher percentage of woodland on soil units 1 and 2 than on the better drained soils of the project area.

In many reaches, woodland is almost nonexistant, and in many others virtually all woodlands will be converted to open land uses without project installation. With installation of the various projects, it is anticipated that virtually all woodlands will be converted to cropland uses, except for minor acreages dedicated to some specific use other than timber production, such as hunting clubs, which presently own some 3 percent of the total woodland area.

Few large and continuous woodland tracts are found, being generally quite small and of less than a section in size. Much of this woodland is along or adjacent to the present drainage system of streams, ditches, lakes or swamps. Timber stands range from heavily cut over to volumes in excess of 8,000 board feet per acre. Species composition varies, with many slow growing, undesirable and cull trees occupying a large portion of the present woodland.

CROPPING PATTERNS

Cropping patterns on open land vary chiefly with the soil mapping unit and with drainage improvement of the wetland soils. (Little difference in cropping patterns in zone B, as compared to zone A, is attributable to the overflow hazard in zone B); in zone C, where frequency, depth and duration of flooding is great enough to seriously affect cropping, long season or permanent crops are rarely found, with most of the acreage in short season crops or idle.

Cotton, rice, soybeans, corn, oats, grain sorghum and pasture represent the major open land crops upon which this project analysis is based. The project area as a whole is developing rapidly, and much of the needed farm and group drainage installation is anticipated to be done, with an associated shift in cropping patterns to higher percentages of long season crops, without improvement of existing drainage outlets. With the planned project works, considerable amounts of additional farm drainage installation and more intensive land use are anticipated, with an increased acreage of cotton on drained lands and proportionate decreases in other crops, particularly rice on soil unit la

Since the data for zone B includes some undrained as well as drained acreages, the cropping shown on Tables II B, III B, and IV B represents the weighted estimates for drained and undrained conditions.

YIELDS

Field crop and pasture yields are estimates of yields that are currently being attained or that can be expected to be attained by average producers, using a reasonable level of management, under future conditions, with and without drainage. All yields, in all project zones, are for average flood-free years. Within Zone B, under present, future without project, and future with project conditions, there are varying percentages of total acreage that are or would be drained. These percentages were used in computing weighted yields for Table II B, III B, and IV B for each crop.

Computations for Zone A are only for net acreages to be drained, and since none of the acreage in Zone C will be drained, weighting was unnecessary in these two zones.

Woodland yields are based upon sampling studies conducted in the area by the U. S. Forest Service. Woodland yields are based on average growth rates applicable to the species and stand size and ages found in the area. The yields represent the units of wood products and value that will be attained on the average for the next 50 years under the level of management that can be expected to prevail based on present findings in the project area. Board foot and cubic foot units of production of wood products per acre are not shown in Tables II and III due to complexity of computations. For simplicity, the yield for Table III has been consolidated into a per acre value of production discounted to present worth. Unit yields of wood products used in the consolidation are available in the working papers.

PRICES

Woodland production values, as used in Table III, are based on 1955 prices for woodland products F.O.B. mill or siding. 1955 prices are used since they appear to be realistic price projections for future conditions. The production values shown for the future without project conditions have been discounted to present worth in connection with increments in production and value due to application of high level management practices and any time lags in availability of products for harvest.

Projected field crop and livestock prices used in this report were developed jointly by the Agricultural Research Service and the agricultural Marketing Service. Projected prices have been used, based on most likely long range expectations, and estimates of cropping patterns have been influenced by the assumption that such prices will prevail. Projected prices were developed from studies of the prospective conditions of product supplies and requirements. In order to remove the effects of price support programs and in order to reflect the economy of production in competing areas, the projections assume the eventual attainment of a relatively free market for agricultural products.

In evaluating the long-run aspects of deferred land development and improvement projects, the use of projected prices makes it unnecessary to restrict the acreage of "control" crops in crop income computations.

Crop acreages shown for future conditions are not compatible with a projection of current prices into the future, however. Neither do they seem to portray attainable goals for restricted crops during the surplus disposal period in the immediate years ahead. Therefore, if current prices were to be used in projection of future project conditions or for projects where early construction is contemplated, there would appear to be little or no justification for increasing the acreage of surplus or "control" crops (cotton and rice) over current allotment acreages.

CROP PRODUCTION COSTS

Production costs for forest products are based on costs prevailing in and adjacent to the project locality during 1955. These costs are estimated to be at a reasonable level for projection to future conditions. Production costs have been discounted to present worth in the same manner as production values. Costs cover conversion of standing timber to raw wood products at mill or rail siding, including a return to management, and a cultural and crop management cost consisting of an amortized annual charge for timber stand improvement work; an allowance for management and supervision by owners, their representatives, and foresters, and forest protection.

Production costs for all field crop and livestock enterprises

were developed from a study of large and small Mississippi. River bottomland farms. Because production costs by enterprises are not the same . for large as for small farms, these costs were weighted in accordance with the proportionate acreage of land in large and small farms expected to exist in the project area under future conditions. In some project areas within the same reach it will be noted that there is a difference in production cost for the same crop at the same yield level between the future without project and future with project conditions. This is because the percentage of land expected to be in large farms without the project is different from the percentage of land expected to be in large farms with the project. Production costs, as used for project evaluation purposes, include all operational costs required to attain yield levels indicated in project cost tables (such as allowances for all labor, power, machinery, and materials required to produce and market the product), all farm overhead costs necessary in farm operation (except for a charge for land), and an allowance for management expense which includes an estimated amount required for the operator's management and for any employed management personnel or services.

Land charges were omitted from the cost analysis because net returns to land were being determined for conditions with and without the project features. Overhead costs include such items as a charge for buildings, maintenance and replacement of farm machinery, interest on investment, insurance, and personal property taxes. Specified production costs are all costs incurred in production and marketing of the crop or livestock. These specified costs do not include overhead and management charges. Overhead and management costs were allocated to each enterprise in proportion to the specified costs of production expended on the enterprise. Some production costs were treated as variables with yield levels attained (most harvest costs, fertilizer, poisoning, etc.) while other costs were assumed to be fixed regardless of yield (soil preparation, cultivation, and a portion of machine-picking cost). Preharvest, harvest, overhead and management costs were computed separately to derive total crop production costs.

Production costs used for projections are approximately 96 percent of the 1955 level of costs incurred by farmers.

Crop yield - production cost relationships are not the same for summary tables (all soils) as for the individual soils tables from which the summary tables are constructed. A small portion of this difference is statistical in nature (statistical error due to rounding to commonly used units) and can be ignored. The major difference, however, is due to the computing of both yields and production costs in the summary tables where total production and total cost of each crop for all soils is divided by the total acreage of that crop. If all costs bore a direct (straight-line) relationship to yield, these differences, except for statistical error, would not occur. Because this situation does not exist, an entirely accurate production cost for a given yield in the summary tables cannot be read from the standard cost tables that were

developed. To get entirely accurate detailed costs (preharvest, harvest, overhead and management) in the summary tables that would be comparable to the costs used in the individual soil unit tables, it would be necessary to weight each of the components of total cost with the same acreage used in the individual soil unit tables.

The difference between the computed costs used in the summary tables for a given yield and the unweighted costs (standard cost tables) is not expected to exceed 10 percent on any given component of total cost - spot checks of actual data have not exceeded five percent. Therefore, unless greater accuracy is desired than that provided by summary tables, it will not be necessary to weight detailed cost data for flood damage analysis purposes if standard detailed cost tables are used in determining such costs.

In those cases where supplemental irrigation is involved (on crops other than rice which is an irrigated crop), irrigation costs are computed separately and added to standard production costs. These irrigation costs consist of preharvest and overhead charges. They have been added to standard nonirrigated production costs in proportion to acres irrigated in all tables where supplemental irrigation is involved.

NET CROP PRODUCTION RETURNS

The analysis of crop production by soil units, upon which the summary tables are based, generally indicate the gross value of production to be greater than production costs. For the future conditions without the project, however, production costs of some crops on some of the soil units are higher than gross value of the crop. A correction has been made in the summary tables to remove the effect of these negative net returns where they occur. In making the correction, the actual returns for the negative net returns was assumed to be zero. In the long-run, shifts in land use may be expected that would largely avoid the losses incurred with the cropping system shown. By indicating a net income of zero for crops having a negative net return, the net error involved is negligible, and well within the limits of error in basic information used in project area analysis. Higher yields, as expected, show larger net returns to land than lower yields for the same enterprise.

The basic principle involved in this analysis is that project justification should not be dependent upon negative values and, therefore, that the total net returns shown for future project conditions places a ceiling on project benefits. Inasmuch as this analysis assumes floodfree years, consideration has not been given to the effect of flood damage on average annual net income. Consideration of the relation of this production and income analysis to flood damage analysis can be given only after flood losses have been estimated.

LAND USE CONVERSIONS AND COSTS

Table VI shows the land use conversions that are anticipated from the several St. Francis River Basin Projects and the development of the

associated farm and group drainage systems. Table VI also contains the costs of making all woodland conversions (1955 level). Moderate amounts of conversion of woodland to general cultivated crops (dry land) and irrigated crop (rice) and pasture use can be expected with provision of major drainage outlets and associated farm and group drainage systems. It is estimated that these conversions will all be profitable enough to be desirable from the standpoint of the owner and operator. If the operator secures the inducement of a reasonable income over and above his loss of present woodland value and his land use conversion and drainage costs, he will probably go ahead with land conversions rather than wait for a long period of years for deferred woodland income.

Items of conversion cost include all expense of putting woodland from its present state into condition to produce a crop or livestock enterprise, with only normal production costs remaining to be incurred.

This statement excepts considerable acreages of irrigation which will also be expected with drainage installation. Costs of installation and maintenance of irrigation systems are included in costs of production. Also included in costs of production are costs of establishing and maintaining pasture on converted woodlands.

All capital costs of land conversions have been amortized at 5 percent for a period of 50 years.

FARM DRAINAGE SYSTEMS AND COSTS

Table VII contains estimates of amounts and costs of farm drainage systems that can be expected after satisfactory major outlets and connecting group drainage systems are developed. These estimates anticipate that approximately 80 percent of the wet open land will be drained and used for crop production. Approximately 10 percent of the open land is used for farmsteads, farm roads, waste, etc. and hence is not available for crop production. An additional area, estimated at 10 percent of the total wet open land, will not be improved because of a lack of farmer participation.

Costs, computed at 1955 levels, include the installation (construction, engineering and contingency) costs required for farm drainage systems for satisfactorily rapid removal of surface water accumulations that are likely to occur for the various conditions of rainfall and run-off involved. Requirements vary by soil mapping units and by land use. Costs include all ditching and appurtenant structural needs for systems to serve an average of one square mile. Estimates are based on standard design data for conditions involved.

Farm drainage system capital costs have been amortized for a useful life period of 15 years at 5 percent. Field experience in farm drainage work indicates that a 15 year useful life period is realistic in view of the relatively stable land use and agriculture of the area. Maintenance costs, varying with the soil mapping unit and land use, have been added to the amortized annual equivalent of installation cost to derive the

arnual cost of farm drainage systems.

All farm drainage costs have been discounted on Table IX at 5 percent to account for an estimated lag of either 10 or 20 years to full installation, maintenance and benefit accrual. The lag period was varied by reaches or projects according to the amount of group drainage system installation required in the particular reaches or projects involved. Most of the area requiring farm drainage can be drained without further improvements in the major outlets; only relatively minor areas will have to wait on farm drainage until further outlet improvements and group drainage systems are installed.

GROUP DRAINAGE SYSTEMS AND COSTS

The area served by the several St. Francis River Tributaries projects is quite large, and large amounts of group drainage system installations are necessary to serve as intermediate drainage to connect farm systems with the major outlets. However, most of this installation is already on the ground or anticipated to be installed without impetus of the proposed projects. Only about 315 miles of additional group drainage ditches and appurtenant structures are anticipated to be required to serve the farm drainage systems that are expected to be installed.

Table VIII itemizes the costs required to install and maintain the group drainage ditches and appurtenant structures. Installation costs have been amortized for a useful life period of 30 years at $3\frac{1}{2}$ percent. Field experience in group drainage work in this and similar areas indicates that a 30 year useful life period is realistic in view of the relatively stable land use and agriculture of the areas involved. Maintenance costs have been added to this amount to derive the total annual cost of group drainage systems.

All group drainage costs have been discounted on Table IX at $3\frac{1}{2}$ percent to account for an estimated 10 year lag to full installation, maintenance and benefit accrual.

BENEFITS AND ASSOCIATED COSTS

Table IX summarizes net annual returns from Tables III and IV for Zones A and B, annual costs of making land conversions (from Table VI), and establishing and maintaining farm and group drainage systems (Tables VII and VIII).

Returns and gross benefit, and all associated cost items, have been discounted in Column 3, Table IX, to account for an estimated lag and buildup period to full installation and maintenance requirements, and benefit accrual.

SUMMARY

The St. Francis River and Tributaries (Arkansas) Project Area is a moderately well developed agricultural area. Most of the soils of the

area are inherently highly productive when adequate farm drainage and good management are applied. Although woodlands constitute only a small percentage of the area, most of the woodlands are anticipated to be converted to cropland in the reasonably near future without impetus of the proposed projects. Major drainage outlets in the area are fair to moderately good, and much farm and group drainage installation can be anticipated in the area without further improvement of the major outlets. However, the project installations, by improving outlets and alleviating flood hazards as well as the psychological effect of major construction work in the various areas, are anticipated to precipitate considerable amounts of farm and group drainage installation. The present group drainage system is fair, with considerable renovation of old ditches being done in various sub-project areas throughout the project area. The major outlet, group ditches and farm systems need to be integral parts of a single system for removal of surface water accumulations; this is a major function of the proposed facility.

Yields for average flood-free years have been used throughout this report. The Corps of Engineers, therefore, may need to modify the future without project values to account for flood damage. They may also need to modify future with project values to account for less than complete flood protection under project conditions.

ST. FRANCIS
BASIN SUMMARY BY REACHES

| ONFILE | Reach 1 Reach 2 Ditch # 40 Ditch # 1 Reach 1 Reach 2 Ditch # 21 Rivervale Culvert | Blackfish Bayou Reach 1 Reach 2 Reach 3 Fifteen Mile Bay Tyronza River Reach 1 Reach 2 Reach 3 | (1) Reach |
|--|---|--|---|
| 26,916 18,680 20,550 | 24,828 9,241 19,312 1,258 1,258 15,278 | 28,858 7,600 6,452 ou: 27,068 4,156 26,150 20,532 | (2) |
| 332,734: 2,429,172: 1,462,207: 1,168,914: | 1,771,876:635,126:1,284,122:638,935:92,814:1,233,982: | 1,872,664 568,099 468,944 1,903,842 1,935,024 1,935,226 1,505,123 | (3) : Futur (Value of Gross : |
| 269,523: 1,902,321: 1,168,177: 923,919: | 1,429,668: 508,373: 1,058,516: 517,470: 72,759: 1,013,490: | 1,528,669: 1,66,295: 381,981: 1,598,752: 281,900: 1,546,961: 1,212,813: | (3) : (4) : (5) Future Without Project (Value of Production in Dollars) Fross : Cost : Net |
| 63,211 526,851 294,030 244,995 | 343,283 1/ 126,930 1/ 227,343 1/ 122,038 1/ 20,055 220,912 1/ | 344,823 1/ 102,035 1/ 87,269 1/ 303,191 1/ 69,124 388,774 1/ 293,781 1/ | (5) ject n Dollars) Net |
| 1,804,395 | 2,768,364 1,028,623 2,030,524 829,274 127,276 1,465,914 | 3,042,917 838,902 731,801 3,082,788 468,242 2,864,971 1,952,943 | (6) : Future W (Value of P Gross : |
| 328,673 : 2,200,996 : 1,589,447 : 1,360,400 : | 2,280,613 851,164 1,627,633 670,595 98,938 1,207,345 | 2,538,759 697,973 608,197 2,569,048 2,385,425 2,383,120 1,552,954 | (6) : (7) : (8) Future With Project (Value of Production in Dollars) Gross : Cost : Net |
| 80,914 608,019 430,437 443,995 | 187,751 177,459 402,891 158,679 28,338 258,569 | 504,158 140,929 123,604 513,740 82,817 481,851 399,989 | |
| 17,703 81,168 136,407 199,000 | 114,468 1/ 50,529 1/ 8,283 37,657 1/ | 159,335 1/ 38,894 1/ 36,335 1/ 205,549 1/ 13,693 93,077 1/ 106,208 1/ | (9) Difference in Net Production |

1/ Adjusted to eliminate negative net return

(Continued)

BASIN SUMMARY BY REACHES ST. FRANCIS

| | Ditch - Reach 1 : 9,183 : 600 Reach 2 : 1,576 : 100 Locust Creek Ditch: 18,374 : 1,059 | 1 1 10,751 1 16,021 1 16,671 1 16,671 | Cockle Burr Inlet: 8,737 : 633 Ditch # 10 : 88,679 : 6,588 | 25 22,743 : | 80466 | Reach Acres (Val | (1) : (2) : (3) |
|--------------------------------------|--|---|---|-------------------------|-----------|---|-----------------|
| 0,763: 2 | 606,695: 109,985: 1,059,208: | 1,099,567 1,260,601 1,104,796 | 6,588,356: | 22,171: | 472,180: | Tuture Tue of F | |
| :472,281 2/: 33,990,763: 27,202,146: | 456,196: 78,577: 818,321: | 874,867: 1,008,502: 856,484: | 484,125: | 1,115,905: | 383,749: | (Value of Production in Dollars) ross : Cost : Net | (4) |
| 6,800,372 | 150,499 31,408 240,887 | 224,700 252,573 <u>1</u> /: 248,312 | 1,360,303 1/: | 7,244 : | 88,431 | n Dollars) : | (5) |
| 49,552,279: | 829,608: 144,396: 1,587,751: | 1,400,341: 1,868,545: 1,668,423: | 844,227: 9,878,244: | 27,480: 2,201,856: | 825,988: | (Value of Pr Gross: | (6) |
| 39,483,719: | 623,217: 104,648: 1,206,849: | 1,094,400: 1,469,470: 1,282,673: | 647,634: 7,746,167: | 19,526: | 620,871: | (Value of Production in Dollars) Gross : Cost : Net | (7) |
| 10,068,560: 3,268,188 | 206,391: 39,748: 380,902: | 305,941: 399,075: 385,750: | 196,593: | 7,954: 484,872: | 205,117: | | (8) |
| 3,268,188 | 55,892 8,340 140,015 | 81,241 146,502 137,438 | 77,965 77,965 | 710 221 , 130 | 116,686 / | Difference in Net Production | (9) |

1/ Adjusted to eliminate negative net return 2/ Total area reduced by 9,187 acres water, 7,051 acres urban, 4,214 acres dedicated woodland, 57,395 acres woodland not anticipated to be cleared, and 702,992 acres already drained, not requiring drainage or not anticipated to be drained.

Basin: St. Francis River
Project: Blackfish Bayou
Reach: 1
State: Arkansas

TABLE I PRESENT LAND USE

| Zone | :Soil map :ping Uni | -: Open : | Wooded : 1 (Acres):(A | Urban Acres | :Water :(Acres) | :Total :(Acres) |
|--|--|--|---------------------------------|----------------|--------------------|--|
| Zone A | : 1 : 1SU : 2 : 2SU : 11 : 11SU | :12,540 :205 :2,259 :15,073 :427 :158 | 3,260: 116: 2,907: 47: | - | : - | : 15,800 : 205 : 2,375 : 17,980 : 474 : 158 |
| Subtotal - all Urban Water Total - Zone A | soils | 30,662 | 6,330: | - | 67 | : 36,992 : 67 : 37,059 |
| Zone B | 1 2 2SU | 4,617 564 5,826 | | • | : - | : 10,945 : 564 : 10,850 |
| Subtotal - all Urban Water Total - Zone B | soils | :11,007 | • : | • | 148 148 | : 22,359 : 148 : 22,507 |
| Zone C | : 1 : 1SU : 2SU : 11SU | 376 914 6144 65 | 100: | - | : - : - | : 476 : 94 : 795 : 65 |
| Subtotal - all Urban Water Total - Zone C | soils | : 1,179 : | 251: - 251: | - | - 166 166 | : 1,430 : 166 : 1,596 |
| GRAND TOTAL - Reach | 1 | :42,848 : | 17,933: | - | 381 | : 61,162 |

Basin: St. Francis River
Project: Blackfish Bayou
Reach: 1
State: Arkansas

SUMMARY - TABLE II A

ZONE FOR DRAINAGE CALCULATIONS ONLY

COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (l) : Soil: | (2) Land use and crop | (3) | : (4) : Pro | : (5) duction | : (6) |
|----------------|---|---|--|---|---|
| Unit | distribution | Acres | : Unit | :Per Acr | e:Total |
| All | Open land Crops Cotton Cottonseed Rice Soybeans Oats (Grain) Grain Sorghum Perm. Pasture Idle Other 1/ Woodland TOTAL | (5,525) 765 3,128 2,706 687 | Lbs.Lint Ton Cwt. Bu. Bu. Lbs.Beef Acres | 3/ 311 •2798 30 19 23 20 145 | :1,717,830 :1,546.05 :22,950 :60,935 :63,279 :13,911 :203,435 |

 $\frac{1}{2}$ / Farmsteads, farm roads, waste and non-agricultural Parenthetical amounts are duplicated acreages

^{3/} Calculated from Columns 3 and 6; rounded to nearest unit 1/ Total area Zone A reduced by 67 acres water, 632 acres not requiring drainage, and 13,059 acres already drained.

Reach: Project: Blackfish Bayou State: Basin: St. Francis River Arkansas

PRODUCTION COSTS AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION, ZONE FOR DRAINAGE CALCULATIONS ONLY (Based on projected prices) SUMMARY - TABLE III A

| : TOTAL | : Other 1/ : | : Grain Sorghum : Perm. Pasture : Idle : : | : Soybeans : Oats (Grain) : | : Cottonseed : | ** ** ** | All : Open land | Soil: Land use and crop: Unit: distribution: | (1): (2): |
|----------------------------------|------------------|--|-----------------------------|---|-------------------|----------------------------|--|-------------|
| 6,312 7/: | 1,217 : Acres | 112 : Bu. 74 : Ibs. Beef 277 : | 146 : Bu. 212 : Bu. | : (2,293) : Ton: : 1,172 : Cwt. | 4,586 : Lbs. Lint | 5.095 | Acres Unit | (3) : (4) |
| •• | •• •• | 17 : 1,90th | 25 : 10,997 | ** • • • • • • • • • • • • • • • • • • | •• •• •• | | Production :Per Acre: Total | : (5) : (6) |
| : 428,826 | : 4.36 : 5, | 2005 | 2,30: | 19 : 63,00 : 47,281 50 : 3,75 : 131,849 | 70 : 25 : 208,467 | :Dollars : Dollars | :Value of production :Per Unit : Total | : (7) : (8) |
| | 5,306 : 2.35 : : | 17.18 : 28.26 : | 29.34 : 17.07 : | 99.96 | 97.92 | | ion :Cost of production: al :Per Acre: Total : | : (9) : (|
| : 365,270 : 63,5565 : 64,3846 | 2,860 : 2,1116 | 1,924 : 989 2,091 : 852 | 13,088 : 12,205 | 117,153 : 14,696 0 | 224,536 : 31,2125 | Dollars : Dollars :Dollars | | (11): (01) |

Farmsteads, farm roads, waste and non-agricultural

Parenthetical amounts are duplicated acreages.

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent

Includes calculated negative net return
Adjusted to eliminate negative net return

正なられてるて Total area Zone A reduced by 67 acres water, 5,066 acres woodland not anticipated to be cleared, and 25,614 acres already drained, not requiring drainage.

State: Reach: Project: Blackfish Bayou Basin: St. Francis River Arkansas

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE CALCULATIONS ONLY SUMMARY - TABLE IV A

(Based on projected prices)

| | | | | | All | Unit | Soil |
|-------------------|----------------------|--------------------------------|----------------------------|-----------|-------------|------------------|--|
| TOTAL | : Idle : Other 1/ | : Oats (Grain) : Perm. Pasture | : Cottonseed : Soybeans | : Crops | : Open land | : distribution | (2) |
| 6,312 5/ | 631 | 302 | : (4,247) | : 4,247 | 6,312 | · Acres | (3) 2/ |
| | · Acres | : Bu. :Lbs.Beef | Bu. | :Lbs.Lint | | tinu. | (1) |
| | ·· ·· ·· | : 42 : 294 : | 25 : | , 06th | | :Per Acre: | : (5) : Production |
| * | | 12,784 | 21,641 | 2,081,200 | 7. | Total | (6) |
| •• •• | ••••• | . 2005 | 2.30 | 25 | Dollars | :Per Unit | : (7) : (8) :Value of production |
| 709,015 | | 9,432 | 149,774 | 520,300 | Dollars | Total | : (8) |
| •• •• | | 25.76: | : 30.01 : | 127.89 | Dollars | :Per Acre: Total | : (9) : |
| 582,999 : 126,016 | | 7,779 | 25,599 | 543,154 | Dollars | | : (9) : (10) : (11 : Cost of production: Net |
| 126,016 | | 3,726 | 24,175 | 95,150 | Dollars | Return | : (11) |

Farmsteads, farm roads, waste and non-agricultural

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent Parenthetical amounts are duplicated acreages

Total area Zone A reduced by 67 acres water, 5,066 acres woodland not anticipated

to be cleared, and 25,614 acres already drained, not requiring or not anticipated to be drained.

Basin: St. Francis River
Project: Blackfish Bayou
Reach: 1
State: Arkansas

SUMMARY - TABLE II B

ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS

COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1) | (2) | : (3) | : (4) | : (5) | : (6) |
|------|---|--|--|-----------|---|
| Soil | | : 4 | | oduction | |
| Unit | distribution | : Acres | : Unit | :Per Acre | : Total |
| All | Open land Crops Cotton Cottonseed Soybeans Oats (Grain) Grain Sorghum Perm. Pasture Idle Other 1/ | : 11,007 : 9,906 : 3,397 : (3,397) | :Lbs.Lint : Ton : Bu. : Bu. : Lbs.Beef : | 3/ | 1,260,095 1,134,09 43,691 51,278 9,648 102,660 |
| | : | : | | : | : |
| | | And the second distriction of the second dis | The second liverage and the second | · · | |

Farmsteads, farm roads, waste and non-agricultural

2/ Parenthetical amounts are duplicated acreages

^{3/} Calculated from Columns 3 and 6; rounded to nearest unit 1/ Total area Zone B reduced by 148 acres water.

Reach: State: Basin: St. Francis River Project: Blackfish Bayou Arkansas

Soi Uni

PRODUCTION COSTS, AND NET RETURNS: COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS (Based on projected prices) SUMMARY - TABLE III B FUTURE CONDITIONS WITHOUT PROJECT

| No market and a | | ٢ | 11 11 |
|-------------------------------------|--|-------------|--|
| Other 1/ Woodland TOTAL | : Crops : Cotton : Cottonseed : Rice : Soybeans : Oats (Grain) : Grain Sorghum | : Open land | : (2) : Land use and crop : distribution |
| 1,466 6,704 21,367 <u>5/</u> | 6,599 (6,599) 2,053 1,466 836 | : 14,663 | (3) Acres 2/ |
| Acres | Lbs.Lint Ton Cwt. Bu. Bu. | | (4) |
| • •• •• •• | 464 34 25 36 | | : (5) : Production :Per Acre: |
| | 3,061,225 2,755.10 69,802 36,946 30,422 19,296 | | (6) |
| . 11.31 | 1 000 2000 2000 2000 2000 2000 2000 2000 | :Dollars | : (7) :Value of :Per Unit |
| 75,822 | 765,306 173,572 261,757 84,976 27,380 29,523 | : Dollars | : (7) : (8) :Value of production :Per Unit : Total |
| 6,57,20 | 121.52 108.92 29.96 22.55 | Dollars: | : (9) : (10 :Cost of product :Per Acre: Total |
| 43,710: 32,112 | 801,914 223,613 43,926 18,849 17,115 | Dollars | : (9) : (10) : :Cost of production: :Per Acre: Total : |
| 32 , 112 269 , 209 | 136,964 136,964 11,050 8,531 12,408 | :Dollars | (11) Net Return |

Farmsteads, farm roads, waste and non-agricultural

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent Parenthetical amounts are duplicated acreages

Total area Zone B reduced by 148 acres water and 992 acres woodland not anticipated to be cleared.

Basin: St. Francis River
Project: Blackfish Bayou
Reach: 1
State: Arkansas

SUMMARY - TABLE IV B ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS

PRODUCTION COSTS AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION (Based on projected prices)

| , | : . | | | | ATI | (1) Soil Unit |
|---------------------|-------------------|----------------------------|----------------------------|---------------------------|----------------|---|
| : TOTAL | Other 1/ Woodland | Oats (Grain) Grain Sorghum | : Cottonseed : Rice | : Cotton | : Open Land | : (2) : Land use and crop : distribution |
| : 21,367 5/ | 2,137 | 1,261 | (10,885) 3,238 3,733 | : 19,230 : 10,885 | : 21,357 | : (3) 2/ |
| •• | Acres | Bu. | . Cwt. | :Lbs.Lint | | (4) |
| •• | A6 | %E(| 15 to | i Ci | 11 | : (5) Production :Per Acre |
| | ••••• | 52,243 24,621 | 110,092 110,092 | 5,500,195 | b | : (6) : Total |
| ** | | 1.53 | 3,75 | | <u>Dollars</u> | : (7) : (8) :Value of production: Per Unit : Total |
| :2,308,400 | | 47,019 | 123,845 | 1,375,049 | Dollars | |
| | | 25.26 | 108,92 | 135.18: | <u>Dollars</u> | : (9) : (10) :Cost of production :Per Acre: Total |
| :1,941,488: 366,912 | | 31,851: | 352,683 | 135,18:1,471,472: 215,438 | Dollars | |
| 366,912 | | 15,168 | 60, 162 | 215,438 | Dollars | (11) Net Return |

Total area Zone B reduced by 118 acres water and 992 acres woodland not Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent Parenthetical amounts are duplicated acreages Farm roads, farmsteads, waste and non-agricultural anticipated to be cleared,

Basin: St. Francis River
Project: Blackfish Bayou
Reach: 1
State: Arkansas

SUMMARY - TABLE II C ZONE OF NO PROJECT BENEFIT COMPUTATION OF AGRICULTURAL PRODUCTION EXISTING CONDITIONS

| (1): Soil: Unit: | (2) Land use and crop distribution | : (3) : Acres | (4) Pr Unit | : (5) coduction :Per Acres | (6) |
|------------------------|--|--|-------------------|----------------------------------|-------------------------|
| All | Open land Crops Corn Soybeans Grain Sorghum Idle Other 1/ Woodland TOTAL | 1,179 1,061 107 318 106 530 118 251 1,430 3/ | Bu. Bu. Bu. | 2/ 29 21 20 | 3,076 6,553 2,144 |

^{1/} Farm roads, waste and non-agricultural
2/ Calculated from Columns 3 and 6; rounded to nearest unit
3/ Total area Zone C reduced by 166 acres watered area.

State: Reach: Basin: St. Francis River Project: Blackfish Bayou Arkansas

SUMMARY - TABLE III C Y ZONE OF NO PROJECT BENEFIT

PRODUCTION CUSTS, AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION (Based on projected prices)

| 7/ 7-+- | : TOTAL | : Other 2/ : Woodland | : Grain Sorghum : Idle | : Soybeans | : Corn | : Crops | All: Open land | •• | Unit: distribution | Soil: Land use and crop | (1) : (2) | |
|---------|-----------------|--------------------------|---------------------------------------|---------------|----------|---------|----------------|------------------|--------------------|-------------------------|-----------|--|
| | 1,179 5/ | 118 | 230 106 | 318 : | 107 | 1,061 | 1,179 | | Acres | •• | (3) | |
| | | Acres | Bu. | Bu. | Bu. | | | •• | Unit | , | : (4) | |
| | | : | · · · · · · · · · · · · · · · · · · · | 23 | ٠٠ | 3/ | | •• | :Per Acre: | Production | : (5): | |
| | • | | 2,506 | 7,253 | 3,439 | e ee |]*: | e . | Total | | (6) | |
| | * ** | •• | 1,53 | 2,30 | 1.15 | •• | | :Dollars | :Per Unit | Walue of production | : (7) | |
| | 25,502 | •• •• | 3,834 | 16,681 | : 4,987 | •• | | : Dollars | : Total | production | : (8) | |
| | | •• •• | : 21.29 : | : 27.90 : | : 29,36: | . ₹. | •• | : Dollars: | :Per Acre: | *Cost of production: | : (9) : | |
| | 14,272 : 11,230 | | 2,257 | 8,873 | 3,142 | | | Dollars :Dollars | Total | roduction | (OT) | |
| | : 11,230 | •• •• | : 1,577 | 7 ,808 | 1,845 | •• | •• | :Dollars | Return | . Net | : (11) | |

- 24 -

Data same for"future without"and"future with project"; no Table IV C required.

Farm roads, waste and non-agricultural.

Calculated from Columns 3 and 6; rounded to nearest unit

Calculated from Columns 3 and 10; rounded to nearest cent

Total area Zone C reduced by 166 acres water and 251 acres woodland not

anticipated to be cleared.

Basin: St. Francis River
Project: Blackfish Bayou
Reach: 1
State: Arkansas

REACH SUMMARY BY SOIL MAPPING UNITS

| 1/ Adjust 2/ Total clear 3/ Total | TOTAL: | Subtotal: | 1 2SU: | | Subtotal: | 1 : 2 : | | Soil : | (T) |
|--|---------------------|----------------|------------------------------|-----------------------------------|--------------|------------------------------------|----------------------|-------------------------|------------------------|
| ed to eliminarea Zone A. ed, and 25,6 area Zones I | 28,858 | 22,546 3/ | 10,750 | U ; | 6,312 2/ | 3,241 389 2,682 | | Acres | (2) |
| Adjusted to eliminate negative net return Total area Zone A reduced by 67 acres wat cleared, and 25,614 acres already draine Total area Zones B & C reduced by 314 acr | :1,872,664 | :1,443,838 | \$57,324 886,514 | | : 428,826 | : 175,942 : 35,900 : 216,984 | \$ ······∂ ·· | (Pr | (3) |
| net return 7 acres water eady drained, by 314 acres | :1,528,669 | :1,163,399 | 1,52,714 1,0,655 | | 365,270 | 158,564 | | Production in Dollars | Future Without Project |
| not requiring water and 1 | : 344,823 | 280,439 | 175,859 | ZONES | 64,384 | 18,206 5,701 40,477 | ZONE) | ollars) | Project |
| Adjusted to eliminate negative net return Total area Zone A reduced by 67 acres water, 5,066 acres woodland not anticipated to be cleared, and 25,614 acres already drained, not requiring or not anticipated to be drained. Total area Zones B & C reduced by 314 acres water and 1,243 acres woodland not anticipated to be cleared. | : 3,042,917 | : 2,333,902 | : 1,104,922 | ZONES B & C (subject to flooding) | 709,015 | 1. 352,077 46,605 310,333 | ZCNE A - (not subj | Gross | : (6) |
| t anticipated to bodland not an | | 2 1,955,760 | 955,427 | to flooding | 582,999 | 290,052 38,456 3,451 | subject to flooding) | (Production in Dollars) | : (7) : |
| to be e drained. to ticipated to | 2,538,759 : 504,158 | 60 : 378, 11,2 | 27 : 149,495 33 : 228,647 | | 99 : 126,016 | 52 62,025 56 8,149 91 55,842 | IR . | n Dollars) | : (8) |
| be cleared. | 159,335 | 97,703 | 44,915 52,788 | | 61,632 | 13,819 2,116 15,365 | | : in Net | : (9) |
| | | | | | | 1K | | | D |

Basin: St. Francis River Project: Blackfish Bayou Reach: State: Arkansas

TABLE VI LAND CONVERSIONS WITH PROJECT

| (1) | : (2): | (3) : Cost : | (4) : Cost : | (5) |
|---------------------------|----------|-----------------|-----------------|---------|
| Type of | Total: | of : | of : | Total |
| Conversion 4 | | | Smoothing: | |
| A | :Acres : | Dollars: | Dollars : | Dollars |
| Per Acre | | | | |
| W to GC | xx: | 60: | 10: | XX |
| W to IC | · XX: | 60: | | XX |
| P to GC | : XX: | XX: | | XX |
| P to IC | : xx: | XX: | | xx |
| GC to IC | : xx: | xx: | xx: | XX |
| GC to P | : xx: | XX: | xx: | XX |
| | 1 m of . | | • | |
| Project | : : | | | |
| W to GC | : 6,636: | 398,160: | 66,360: | 464,520 |
| W to IC | : 1,185: | 71,100: | | 82,950 |
| W to P | : 100: | 6,000: | | |
| P to GC | : 14: | xx: | | 140 |
| P to IC GC to IC | | XX: | | • |
| GC to IC GC to P | | XX: | | |
| GC 00 F | | | 2 | |
| Make 3 | |):7C 060 | יפס מדס | 772 630 |
| Total project | · XX: | 4/5,200: | 10,350 | 993°0TO |
| Annual amortized value 2/ | : xx: | XX | 200 | 30,327 |
| Total annual cost of | | | , . | |
| conversions | : xx: | xx: | XX: | 30,327 |
| | : | | | |
| Total annual cost of | | | XX: | |

State: Reach: Project: Blackfish Bayou Basin: St. Francis River Arkansas

ANALYSIS OF FARM DRAINAGE SYSTEM COSTS

| ** | | en en ge | ₩. | | | | A | | Zone | |
|----------------------|----------|-----------------------|-----------------------------------|------------|--|---------------------|--------------------------------------|-----------|---|--|
| TOTAL | Subtotal | : 2SU - General crops | : 1 - General crops : 1 - Rice | : Subtotal | : 2SU - General crops : 2SU - Pasture | . 2 - General crops | : 1 - General crops : 1 - Pasture | • | : Soil mapping unit and land use | |
| : 13,574 1/: 206,228 | 7,8931 | 3,789 | .2,668···· 1,436· | 5,681 1/: | 2,342 | 350 | 2,829 | Acres | Area | |
| 206,228 | 115,402 | 56,842 | 12,396 | 90,826 | 35,135 | 5,251 | 618 956 684 | Dollars | : Total Cost Installation 2/ | |
| : 19,868 . : | 11,117 | 5,476 | 1,194 : | 8,751 | 3,385 | 506 | μ,716 : 79 | Dollars : | Annual : Equivalent 3/ : Instl, Cost 3/ : | |
| 22,705 | 12,363 | 6,559 | 5,327 477 | 10,342 | 1,054 1,064 | 606 | 5,648 : | Dollars : | Annual : Maintenance: Cost : | |
| 42,573 | 23,480 | 12,035 | 2,671 1,671 | 19,093 | 7,439 27 80 - 27 | t stret. | 10,364 | Dollars | Total Annual Cost | |

^{1/} Does not include 10 percent "other" land.

^{2/} Includes engineering and contingency.
3/ Amortized at 5 percent over 15 years.

TABLE VIII
ANALYSIS OF GROUP DRAINAGE NEEDS AND COSTS

| Item | : Unit | : Amount : | Unit: | Total | | | | | |
|---|-----------------|------------|----------|--------|--|--|--|--|--|
| TOEM | · OILLO | ·Announce | Dollars: | | | | | | |
| Excavation 1/ Spreading spoil 1/ Clearing right-of-way 1/ | : :Cubic Yar | d:141,200: | | 28,240 | | | | | |
| Right-of-way easements | : Acres | 61 | 30.00 | 1,830 | | | | | |
| Crossings | : Each | 10: | 300.00 | 3,000 | | | | | |
| Swinging water gaps | Each | 20: | 40.00 | 800 | | | | | |
| Pipe drop structures | Each | 5 | 200.00 | 1,000 | | | | | |
| Flap gates | : Each | 6: | 100.00 | 600 | | | | | |
| Vegetative plantings | Acres | 20: | 8.00 | 160 | | | | | |
| Total construction cost | : xx | : xx | XX | 35,630 | | | | | |
| Engineering cost | . xx | xx | xx | 3,563 | | | | | |
| Contingencies and legal | xx | : xx | xx | 3,563 | | | | | |
| Total installation cost | | - | | 42,756 | | | | | |
| Annual equivalent - insta (amortized for 30 years | | | | 2,325 | | | | | |
| Annual maintenance cost : 1,781 | | | | | | | | | |
| Annual loss of production - right-of-way 2/ 215 | | | | | | | | | |
| Total annual cost of required group facilities : 4,321 | | | | | | | | | |

These items included in excavation costs under normal contract procedures.

^{2/} Annual loss of production - right-of-way. 18 acres @ \$11.95 per acre.

TABLE IX
SUMMARY OF ANNUAL NET PRODUCTION RETURNS
AND ASSOCIATED COSTS

| | (1) | (2) Total | : (3) :Discounted : Amount |
|----------|---|--|--|
| 1. 2. 3. | Net return with project Net return without project Gross benefit to project | Dollars 504,158 344,823 159,335 | : Dollars : xx : xx : 98,982 2/ |
| | Farm drainage cost a. Installation cost b. Maintenance cost c. Total | 22,705 42,573 | xx 2/ xx xx 26,447 |
| 5. | Group drainage cost a. Installation cost b. Maintenance cost 1/ c. Total | 2,325 1,996 4,321 | xx 3/ xx xx 3,588 |
| 6. | Conversion cost a. Installation cost b. Maintenance cost c. Total | 30,327 30,327 | xx 2/ xx xx 18,840 |

1/ Includes loss of production, right-of-way

2/ Discounted at 5 percent to account for estimated 20 year lag to full installation, maintenance, and benefit accrual.

3/ Discounted at 3½ percent to account for estimated 10 year lag to full installation, maintenance, and benefit accrual.

Basin: Project: Reach: State: St. Francis River
Blackfish Bayou

Z
Arkansas

TABLE I PRESENT LAND USE

| | :Soil map- | : Open | :Wooded | Urban : | Water : Total |
|-------------------|-------------|---------|---------|-------------|--------------------------|
| | | | | | (Acres): (Acres) |
| | : | : | : | | The Hay are the Boundary |
| Zone A | : 1 | 3,570 | | : - : | - : 4,054 |
| | : 2 | | 21 | | : . 842 |
| * | | : 9,380 | :1,417 | : - : | = :10,797 |
| | 4 | : 42 | : - : | : - : | - : 42 |
| | 11 | | | • • • | |
| Subtotal - all | | :14,071 | | * - + + * * | :15,993 |
| Urban | | • | - 1 | 47 ; \$ | - : 47 |
| Water 7 | | 1 A OTT | .1 022 | | 26 : 26 |
| Total - Zone A | = 1811, 191 | :14,071 | 1,922 | 47 | 26,:16,066 |
| Zone B | • 7 | : 685 | 1 274 | | 41,959 |
| Somo Barria | 25บ | 2.118 | | | |
| Subtotal - all | | | 2,215 | | - : 5,018 |
| Urban | | 1 - | 1 - | | 0,010 |
| Water | | | : - /: | - 1 | 102 : 102 |
| Total - Zone B | 1 | 2.803 | :2,215 | | 102 : 5.120 |
| 1 | : | : | | | 3 |
| GRAND TOTAL - Rea | ch 2 | :16,874 | :4,137 | 47 : | 128 :21,186 |
| | : | 1 | : | : | |
| | | | | | |

• 4 \$...

SUMMARY - TABLE II A:

ZONE FOR DRAINAGE CALCULATIONS ONLY

COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| | | | | | - |
|--------------------------|---|---------------------------------------|-----------|------------|-----------|
| (1): (2) | : | (3) | : (4) | : (5) : | (6) |
| Soil : Land use and crop | 2 | 2/ | | Production | |
| Unit:: distribution | : | Acres | : Unit | :Per Acre: | Total |
| : | : | · · · · · · · · · · · · · · · · · · · | : | : ' : | |
| All: Open land | 2 | 9,548 | : | : : | |
| : Crops | 2 | 8,594 | : | : 3/: | |
| : Cotton | : | 3,224 | :Lbs.Lint | | 1,063,825 |
| : Cottonseed | 2 | (3,224) | : Ton | :.2970 : | 957.44 |
| : Rice | 1 | 314 | : Cwt. | : 30 : | 9,420 |
| s Soybeans | 2 | 1,712 | : Bu. | : 21 : | 35,965 |
| Oats (Grain) | | 1,520 | : Bu. | : 25 : | 38,414 |
| : Grain Sorghum | | 396 | : Bu. | : 21 : | 8,366 |
| : Perm. Pasture | • | 866 | :Lbs.Beef | | 125,570 |
| : Idle | | 562. | • | | 120,010 |
| other 1/ | | 954 | | | |
| Woodland | | 1,922 | Acres | | • |
| TOTAL | | 11,470 4/ | | | : |
| TOTAL | • | 11,410 4/ | • | | |
| | | | , , | : : | : |

Farmsteads, farm roads, waste and non-agricultural

Parenthetical amounts are duplicated acreages

^{3/} Calculated from Columns 3 and 6; rounded to nearest unit
4/ Total area zone A reduced by 47 acres urban, 26 acres water,
4,523 acres already drained or not requiring drainage.

State: Reachs Project: Basina Blackfish Bayou St. Francis River Arkansas

SUMMARY - TABLE III A

1 2 ·

ZONE FOR DRAINAGE CALCULATIONS ONLY

COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION, PRODUCTION COSTS AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT

(Based on projected prices)

| -निकाक्षमालाकामा निकाकामालाकामा | | | | العما |
|--|--|--|------------------------------|---|
| Par Cal Inc | ** ** ** ** | | A11 1 | (1) Soil Unit |
| Farmsteads, farm roads, Parenthetical amounts a Calculated from Columns Calculated from Columns Includes calculated neg Adjusted to eliminate n Total area zone A reduc | Wood | ржио рин | Ope | Lan |
| rea ca | Çther Woodland TOTAL | Cottonseed Rice Soybeans Oats (Grain) Grain Sorghum Perm. Pasture Idle | Open land Crops Cotton | (2) Land use and crcp distribution |
| farm roads, cal amounts at from Columns from Columns alculated nego eliminate no zone A reduction | ` % ը տ | nsee ans (Gra Sor | n nd | (2) e an buti |
| mount Coll Coll ated mina | | d in) ghum ture | | d cr |
| Farmsteads, farm roads, we Parenthetical amounts are Calculated from Columns 3 Calculated from Columns 3 Includes calculated negatificated to eliminate negational area zone A reduced | ** ** ** ** ** | 60 00 00 00 00 00 | | -6 |
| waste dup 3 and 3 and 4tive sgative by | 20 | | • 0 0 | (3) |
| aste and duplical and 6; and 10; ve net intive net by 47 ac | 702 702 | 268) 338 248 98 31 47 | 363 268 | es 2 |
| O | | | | |
| non-agricultural bed acreages rounded to near rounded to near eturn return return 26 ac | Acres | Fon Cwt. Bu. Bu. | bs. Lint | (4) Unit |
| ages to | | | | |
| nea nea | | 2490 30 26 27 28 200 | . | rodu Per |
| ultural es to nearest to nearest | | 490 30 28 17 | 388 | : (5) : Production :Per Acre: |
| unit | | | 4 | |
| | | 442.52 10,140 6,512 2,768 527 9,390 | 491,685 | (6) Total |
| 5 88 | 00 00 00 00 00 | 0 3 6 8 0 8 | | |
| a Cr | ere a service de la service de | | 10 Lars | ; (7) ;Value of ;Per Unit |
| we see | 4.36 | 63.00 3.75 2.30 1.53 | 25 | |
| odla | n 11 (11 11 11 11 11 11 11 11 11 11 11 11 | 10 00 00 00 00 00 00 | | proc. |
| nd n | 1,478 | 27,879 38,024 14,978 2,510 806 1,883 | 122,921 | (8) oducti Total |
| ot a | 78 | 879 024 978 510 806 883 | μ , | og a |
| ntici | 'n | 99, 30, 18, 17, | 102-82 | : (9) : :Cost of pi |
| ipate | 23 33 55 | 99,96 30,59 18,63 17,18 28,49 | 82 | of |
| ad to | 13 | ta to the total | 10 | or odu |
| be | 796; 76,240; | 33,786; 7,587; 1,826; 1,533; 1,339; | 130,373; | (8) : (9) : (10) : production: Cost of production: Fer Acre: Total: |
| 583 acres woodland not anticipated to be cleared, | ଜୁ ଜା | | | 1 |
| red, | 796; 682 176,240; 34,239 ; 34,470 | 7,238 7,391 273 544 | 20,427 20,658 | (11) Net Return |
| | [olo | | න 7 | 3 |

-32-

and 11,708 acres already drained or not requiring drainage.

Reach: State: Projects Basin: Blackfish Bayou St. Francis River Arkansas

SUMMARY - TABLE IV A

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS FITH PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE CALCULATIONS ONLY (Based on projected prices)

| TOTAL | :Woodland | : Other 1/ | : Idle | * Perm. Fasture | : Grain Sorghum | : Oats (Grain) | : Soybeans | * Rice | * Cottonseed | : Cotton | : Crops | All : Open land | •• | Unit: distribution | Soil : Land use and crop | (1): (2) |
|------------------|-----------|------------|--------|-----------------|-----------------|----------------|--------------|----------|--------------|----------------|---------|-----------------|------------------------------|---------------------------|---|------------|
| 2 | 99 | ** | •• | •• | •• | 64 | •• | 40 | : (1 | * | ** 2 | * 2 | •• | • A | ** | * |
| 2,702 5/ | 1 | 270 | 74 | 46 | 36 | 113 | 321 | 244 | (1,598) | 598 | 2,432 | 2,702 | | Acres | 2/ | (3) |
| 7. | * Acres | •• | •• | :Lbs.Beef | : Bu. | : Bu. | : Bu. | : Cwt. | * Ton | :Lbs.Lint | •• | •• | •• | : Unit | •• | : (4) |
| | ** | •• | •• | : 305 : | : 24 : | : 43 : | : 27 : | : 35 : | : .4487 : | : 499 : | 3/ : | •• | ** | :Per Acre: | Production | : (5) : |
| : | | | | 14,030 | 864 | 4,869 | 8,602 | 8,540 | 716.98 | 796,650 | | | | Total | | (6) |
| • • | •• | • | •• | 2005 | 1. 1.53. | . 90 | 2. 30 | 3.75 | : 63.00 | 25 | •• | •• | :Dollars | Per Unit | :Value of | 1 (7) |
| 304,659 | •• | | •• | 2,813 | 1,322 | 4,382 | : 19,785 | 22,025 | : 45,170 | • | •• | •• | : Dollars | : Total | production | : (8) |
| | ••. | •• | •• | : 41.76 | : 21.51 | : 26.21 | : 31.06 | :111.17 | •• | 199,162:130,24 | : 4/ | - | .Dollars | :Per Acre | :Cost of | : (9) |
| 250,870 : 53,789 | •• | | •• | : 1,921 : | : 774 | : 2,962 | : 9,971 | : 27,125 | ** | :208,117 | •• | •• | :Dollars : Dollars : Dollars | :Per Acre: Total : Return | : Value of production : Cost of production: Net | (9) ; (10) |
| 53,789 | | | | 892 | 548 | : 1,420 | 9,814 | 4,900 | | 36,215 | | | Dollars | Return | Net . | (11) |

Farmsteads, farm roads, waste and non-agricultural

Calculated from Columns 3 and 6; rounded to nearest unit. Parenthetical amounts are duplicated acreages

Total area zone A reduced by 47 acres urban, 26 acres water, 1,583 acres woodland not anticipated to be cleared, and 11,708 acres not requiring drainage, not anticipated to be drained or already drained.

|जामाळादी-Calculated from Columns 3 and 10; rounded to nearest cent

4.

SUMMARY - TABLE II B

ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS

COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1) s Soil: | (2) Land use and crop | ş (3) z . 2/ | : (4) | ; (5) Producti | |
|----------------|--|---------------------------------|----------------------------|---------------------------------|--|
| Unita | distribution | : Acres | : Unit | Per Acr | es Total |
| : | Open land Crops Cotton Cottonseed Soybeans Oats (Grain) Grain Sorghum Perm. Pasture Idle Other 1/ Woodland | \$ 409 \$ 280 \$ 2,215 | Buo Buo Buo Lbs Beef Acres | : .3406 : 23 : 31 : 24 | 353,815 318,44 10,912 12,960 3,216 25,475 |
| | TOTAL | ² 5,018 ₄ | / | : : | : |

Farmsteads, farm roads, waste and non-agricultural
Parenthetical amounts are duplicated acreages.
Calculated from Columns 3 and 6; rounded to nearest unit
Total area zone B reduced by 102 acres water.

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS (Based on projected prices) SUMMARY - TABLE III B

| Rarmetoode form roode | : TOTAL : | :Woodland : | : Other 1/ : | : Idle : s | : Grain Sorghum : | : Oats (Grain) : | s Soybeans. | : Rice | : Cottonseed : | : Cotton : | : Crops | All: Open land: | •• | Unit: distribution : | Soil : Land use and crop : | (1): (2): |
|---|------------------|-------------|--------------|------------|-------------------|------------------|-------------|-------------|----------------|------------------|---------|-----------------|---------------------|----------------------|---|-----------|
| | 4,898 5 | 1,384 | 352 | 320 | : 177 | 187 | : 361 | : 336 | (1,781) | 1,781 | 3,162 | 3,514 | | Acres | .2/ | (-3) |
| *************************************** | `. | : Acres | ••. | •• | : Bu. | : Bu. | : Bu. | : Cwt. | : Ton | :Lbs.Lint | •• | | •• | : Unit | | : (4) |
| * 2 | •• | | •• | •• | 26 8 | : 40 : | : 26 : | 34 : | : .4341 : | • 4 <u>8</u> 2 : | : 3/: | | •• | : Per Acre: | Production | : (5) : |
| - | · : | | • | | 4,621 | 7,425 | 9,532 | 11,424 | 773.09 | 858,985 | ٠., | | | Total | | (6) |
| •• | *** | : 11.31 | •• | •• | : 1.53 | . 90 | : 2.30 | s 3.75 | : 63,00 | 25 | •• | •• | :Dolbrs | :Per Unit | :Value of | : (7) |
| •• | : 357,620 : | : 15,653 | •• | •• | : 7,070 | : 6,682 | : 21,924 | : 42,840 | : 48,705 | : 214,746 | •• | | : Dollars | : Total | production | : (8) |
| - | | 6.52 | ••. | ••• | s: 2282 s | : 24.28 | : 30.80 : | : 108,92 | •• | : 126-19: | : 4/ | •• | :Dollars | :Per Acre: | :Cost of | (9) |
| | 290,055 : 67,565 | 9,024 : | | •• | 4,039 | 4,540 : | : 11,119: | : 36,597 : | | : 224,736 : | | | : Dollars : Dollars | : Total : Return | : Value of production : Cost of production: Net | : (0) : |
| | 67,565 | 6,629 | | | 3,031 | 2,142 | | 6,243 35 | | 38,715 | | | Dollars | Return | Net | (11) |

Farmsteads, farm roads, waste and non-agricultural

Parenthetical amounts are duplicated acreages.

Calculated from Columns 3 and 6; rounded to nearest unit

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Calculated from Columns 3 and 10; rounded to nearest cent

Total area zone B reduced by 102 acres watered and 120 acres woodland not anticipated to be cleared.

PRODUCTION CCSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE AND FLOOD CONTROL CAI, CULATIONS (Based on projected prices) SUMMARY - TABLE IV B

| | | | 3 | ,, | | | All. | Unit | Soil | E |
|-----------------|----------------|---|----------------|------------|------------|---------|-----------|--------------|---|---------|
| TOTAL | Idle Other 1 | • Oats (Grain) • Grain Sorghum | s Soybeans | Rice: | Cotton | : Crops | Open land | distribution | : Land use and crop | (2) |
| 4,898.5 | 166· | 302 · · · · · · · · · · · · · · · · · · · | 495 : | \$ (6,000) | | 4,408 | 4.898 | Acres . | 2/: | 3 (5) |
| Acres | : " " . | ·Bu. | Bue | Cwt | Lbs.Lin | | | Unit | | (4) |
| •• •• | | 26 : | 26 . | 03 44 | 506 | 3/ | | :Per Acre: | Production | : (5) : |
| | | 12,700 : 5,740 : | .12,874 | 20,026 | 1,334,610: | : | | Total : | | (6) |
| | • | 1.53: | 2.30 -: | 3,75 | 25.5 | •• | Dollars | Per Unit: | Walue of production : Cost of production: Net | (7) |
| 534,243 | | 11,430 8,782 | 29,610 | 75.097 | 333,652 | | Dollars . | Total . | oduction | (8) |
| | | 25,62 t 22,81 t | : 30.48 : | 108,92 | : 134,75 : | • 4/ | :Dollars | :Per Acre: | :Cost of p | ; (9) ; |
| 447,103: 87,140 | | 5,019: | 15,117: | 64_154 | 355,076: | | Dollars : | Total | roductions | (10) |
| 87,140 | | 3,693 | 15,117: 14,493 | 10.943 | 54,248 | | Dollars | Return | Net | (11) |

Farmsteads, farm roads, waste and non-agricultural Parenthetical amounts are duplicated acreages

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent

Total area zone B reduced by 102 acres water and 120 acres woodland not anticipated to be cleared.

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State: Reach: Project: Basin: St. Francis River Blackfish Bayou Arkansas

REACH SUMMARY BY SOIL MAPPING UNITS

| | | | | | | e net return | Adjusted to eliminate negative net return | justed to elin | 1/ Ad |
|------|-----------------|-----------------|---------------------------|--------------------|-----------------|-------------------------|---|----------------|-----------------|
| | 38,894 | 140,929 | : 697,973 | 838,90,2 | 102,035 | 466,295 | 568,099 | 7,600 | TOTAL: |
| | 19,575 | 87,140 | : .447,103 | 534,243 | 67,565 | 290,055 | : 357,620 | 4,898 3/ | Subtotals |
| | 8,473 11,102 | 26,929 | : 173,933 | 200,862 333,381 | 18,456 | 77,335 | 95,791 : 261,829 : | 1,870 | 1 · 3 2SU ·· 3 |
| | : 19,319 | 53,789 | : 250,870 : | 304,659 : 250,870 | 34,470 | 176,240 | : 210,479 : | 2,702 2/ | Subtotal: |
| -37- | 1,169 8,687 | 3,841 35,573 | 20,169 | 24,010 | 2,672 26,886 | 14,201 117,809 | 16,873 : 144,695 : | 1,709 | 2 2 2SU : |
| | •• | | (not subject to flooding) | | 0 | ; | •• | | • |
| tion | :Net Production | Net | : Cost : | Gross | 14 | Cost | : Gross : | Acres | Unit : |
| ni e | Difference in | (s) | (Production in Dollars) | Futur (Produc | roject : | (Production in Dollars) | Futu Pro | | Soil : |
| | : (9) | (8) | : (7): | (6) | . (5) | (4) | : (3) : | (2) | (1) |
| | | | | | | | | | |

LNL Total area Zone B reduced by 102 acres water and 120 acres woodland not anticipated to be cleared. Total area Zone A reduced by 47 acres urban, 26 acres water, 1,583 acres woodland not anticipated to cleared and 11,708 acres already drained, not anticipated to be drained or not requiring drainage. ье

Project: Reachs States

Basin: St. Francis River Blackfish Bayou Arkansas

TABLE VI LAND CONVERSIONS WITH PROJECT

| (1) | | | • | | | |
|--|---|--------|----------|---------------|------------|------------|
| Type of Conversion 1/ * Amount : Clearing : Smoothing : Cost Per Aore | (1) | 2 | (2) | 2 (3) | : (4) | : (5) |
| Conversion / | | : | | : Cost | : Cost | : |
| Conversion Amount : Clearing : Smoothing : Cost | Type of | | Total | of: | : of | : Total |
| Per Acre W to GC W to IC XX : 60 : 12.50 : XX W to IC XX : 60 : 12.50 : XX W to P XX : 60 : 12.50 : XX XX : XX : XX P to GC XX : XX : 12.50 : XX P to IC XX : XX : XX : 12.50 : XX GC to IC XX : XX : XX : XX : XX GC to P Project W to GC W to IC Y | | 1/ : | | | :Smoothing | : Cost |
| Per Acre W to GC xx 60 12.50 xx W to IC xx 60 12.50 xx W to P xx 60 xx xx P to GC xx xx xx 12.50 xx P to IC xx xx xx xx xx GC to IC xx xx xx xx xx GC to P xx xx xx xx xx Project W to GC 1,464 87,840 18,300 106,140 W to IC 253 15,180 3,162 18,342 W to P 6 360 xx 360 P to GC 5 xx 62 62 P to IC 2 xx 25 25 GC to IC 2 xx 25 25 GC to P 2 xx 103,380 21,549 124,929 Annual amortized value 2/ xx xx xx xx xx 6,844 | | - | | | | : Dollars |
| W to GC W to IC XX : 60 : 12.50 : XX W to P XX : 60 : 12.50 : XX W to P XX : 60 : 12.50 : XX XX : XX : XX P to GC XX : XX : XX : 12.50 : XX P to IC XX : XX : XX : 12.50 : XX GC to IC XX : XX : XX : XX : XX GC to P Project W to GC 1,464 : 87,840 : 18,300 : 106,140 W to IC 253 : 15,180 : 3,162 : 18,342 W to P 6 : 360 : XX : 360 P to GC P to IC C to IC GC to IC | Per Acre | 4 . | - | | - | 1 |
| W to IC W to P XX | | | XX | 1 60 | 1 12.50 | 2 XX |
| W to P P to GC XX | : | | * 64. | • | | t XX |
| P to GC | 2 | | ; | | | |
| P to IC GC to IC GC to P Project W to GC W to IC W to P F to GC F to IC CC to I | | | | | | , |
| GC to IC GC to P XX | | | 1 | | | |
| ## Comparison of | | 1 1 | 1 | • | 1 100 | • |
| Project W to GC 1,464 87,840 18,300 106,140 W to IC 253 15,180 3,162 18,342 W to P 6 360 xx 360 P to GC P to IC 2 xx 25 25 GC to IC GC to P Total project xx 103,380 21,549 124,929 Annual amortized value 2/x xx xx xx xx 6,844 Total annual cost of | | | | | 7: | |
| Project W to GC 1,464 87,840 18,300 106,140 W to IC 253 15,180 3,162 18,342 W to P 6 360 P to GC 7 xx 62 62 P to IC 7 xx 7 x | | | | - | | • |
| Project W to GC W to IC W to IC W to P GC P to GC P to IC GC to IC GC to P Total project XX X | | | 1 | | | 1 . |
| W to GC 1,464 87,840 18,300 106,140 W to IC 253 15,180 3,162 18,342 W to P 6 360 xx 360 P to GC 5 xx 62 62 P to IC 2 xx 25 25 GC to IC - xx xx - GC to P - xx 103,380 21,549 124,929 Annual amortized value 2/: xx xx xx 6,844 Total annual cost of - </td <td>•</td> <td></td> <td>1000</td> <td></td> <td>*</td> <td></td> | • | | 1000 | | * | |
| W to IC W to P 6 360 xx 360 P to GC P to IC C 2 xx 25 25 GC to IC GC to P Total project xx 103,380 21,549 124,929 Annual amortized value 2/ xx xx 6,844 Total annual cost of | | | 1 464 | 87 840 | 18 300 | 106 140 |
| W to P P to GC P to GC S xx 62 62 P to IC C 2 xx 25 25 GC to IC GC to P Total project Annual amortized value 2/2 xx xx xx xx xx 6,844 Total annual cost of | · · · · · · · · · · · · · · · · · · · | | | • | | |
| P to GC P to IC CC | | | | | | |
| P to IC GC to IC GC to P Total project Annual amortized value 2/2 xx | 1 | | 5 | | | |
| GC to IC | | | | | | ** |
| GC to P Total project xx 103,380 21,549 124,929 Annual amortized value 2/2 xx xx xx 6,844 Total annual cost of | • | | 1116 | | | 20 |
| Total project .xx : 103,380 : 21,549 :124,929 Annual amortized value 2/: xx : xx : xx : 6,844 Total annual cost of | | | , | 11.11 | | · |
| Annual amortized value 2/2 xx : xx : xx : 6,844 Total annual cost of | GO 00 F | | | * | 3 XX | - |
| Annual amortized value 2/2 xx : xx : xx : 6,844 Total annual cost of | | | | | | \$ |
| Annual amortized value 2/2 xx : xx : xx : 6,844 Total annual cost of | Total project | | 70 | 103 390 | 4 91 540 | * 1 04 OOC |
| Total annual cost of | TOOKT Project | | P. A.A. | · Too Spo | 21,049 | 1754,959 |
| Total annual cost of | Annual amortized wal | 110 2/ | age age. | diament | | |
| | | 2/1 | XX | * * * * * XX | XX | 5 6,844 |
| | Total annual cost of | | | men greet () | | : |
| TOTAL CALULTON TO THE TAX TO THE | | | | | | * |
| | 2011/01/01/01/01/01/01/01/01/01/01/01/01/ | | ×x, | XX | : XX | |
| | | • | | | . \$ | : |

W-woodland; GC- general dry-farmed crops; IC- irrigated crops; (rice); P-pasture.

Amortized over 50 years at 5 percent.

| State: | Reach: | Project: | Basin: |
|----------|--------|-----------------|-------------------|
| Arkansas | 2 ::: | Blackfish Bayou | St. Francis River |

ANALYSIS OF FARM DRAINAGE SYSTEM COSTS:

| TO TH | \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ | | | , t t | *. ***** | ; | | A | Zone | (I) |
|---------------------------------------|--|----------|-------------------------|----------------------------------|-------------|---|-------------------|----------------------------|---------------------|--------------|
| Includes engineering and contingency. | FOTAL | Subtotal | : 2SU - General crops : | : 1 - General crops : 1 - Rice : | Subtotal | : 2SU - General crops : 2SU - Pasture : | 2 - General crops | 1 - General crops 1 - Rice | Soil mapping unit : | (2) |
| "other" land | 3,855 1/ | 1,423 1/ | 712 | 462 249 | 2,432 1/ | 1,492 | 140 | Aores 510 | Area | (3) |
| 5 | \$ 56 ₂ 668 | 20,824 | 10,681 | 7,994 | 35,844 | 22,384 | 2,101 | 1,890 | liation 2/ | : (4) |
| Amortized over 15 years | 5,458 | 2,006 | 1,029 | . 770 . 207 | 3,452 | 2,156 | 202 | 950 182 | *Equivalent 3/ | ; (5) |
| 15 years at 5 percent. | £ 6,171 | 2,237 | 1,232 | 922 | 3,934 | 2,583 | 242 | Dollars 1,018 73 | nance | : Annual (6) |
| | 11,629 | 4,243 | 2,261 | 1,692 | 7,386 | 4,739 | 444 | 1,868 255 | Annual Cost | (7) |
| - 3 | | | | | | | -39- | | | |

Basin: Project: Reach: State: St. Francis River
Blackfish Bayou

2
Arkansas

TABLE VIII
ANALYSIS OF GROUP DRAINAGE NEEDS AND COSTS

| | | | Unit : | Total | |
|--|----------------|-------------|------------------------------------|---------------------------------|-----|
| Item | Unit : | . Amount : | : Cost : | THE RESERVE THE PERSON NAMED IN | |
| | : | | Dollars: | Dollars | |
| Excavation 1/ | | | : | • | |
| Shaping or spreading spoil 1/ | :Cubic Yard: | 24,600 | 0-20 | 4,920 | |
| Clearing right-of-way 1/ | *Cubic lard: | 24,000 | : 0,20 | 1,020 | |
| Right-of-way easements | : Acres : | 9 | 30,00 : | 270 | |
| inagino da may concentration | | | : | | |
| Crossings | : Each : | 3. | 300,00 | 900 | |
| | : | | 10.00 | 80 1 | |
| Swinging water gaps | : Each : | 2 | 40.00 | 80 | |
| Pipe drop structures | Each : | 1 | 200.00 | 200 | |
| Tipe diop soluciones | i Baon i | | | | |
| Flap gates | : Each : | 1 | : 100.00 : | 100 | |
| | : : | | | | |
| Vegetative plantings | : Acres : | 3. | : 8,00 | . 24 | |
| | : : | <u> </u> | 1 | ` | •* |
| total construction cost | : xx : | xx | e ⁿ o sinc e | 6,494 | |
| ocal constituecton cost | : | 22 | 2 | | |
| Engineering cost | : xx : | xx | : XX | 649 | |
| | : : | | \$ | · Market | |
| Contingencies and legal | : xx : | xx | : XX | 649 | : • |
| | : : | | * | | |
| | | | | | |
| Total instal lation cost | | · | | 7 792 | • |
| Total instal lation cost | | | | 7,792 | |
| Total instal lation cost Annual equivalent - installat: | ion cost | | | 7,792 | |
| | | | | 7,792 | |
| Annual equivalent - installating (amortized for 30 years a | | * | | . 424 | |
| Annual equivalent - installati | | > | | | 2 |
| Annual equivalent - installation (amortized for 30 years annual maintenance cost | at 3½ percent) | » | | 424 | 2 |
| Annual equivalent - installating (amortized for 30 years a | at 3½ percent) | 2/ | | . 424 | |
| Annual equivalent - installation (amortized for 30 years annual maintenance cost | at 32 percent) | 2/ | | 424 | |

^{1/} These items included in excavation costs under normal contract procedures.

^{2/} Annual loss of production - right-of-way. 4 acres @ \$13.43 per acre.

Basin: Project: Reach: State: St. Francis River
Blackfish Bayou

2
Arkansas

TABLE IX SUMMARY OF ANNUAL NET PRODUCTION RETURNS AND ASSOCIATED COSTS

| (1) | (2) | 1 (3) |
|--|------------------------------|-----------------------|
| | | : Discounted |
| Item : | Total | : Amount |
| | Dollars | Dollars |
| 1. Net return with project 2. Net return without project 3. Gross benefit to project | 140,929 102,035 38,894 | xx xx 24,162 2/ |
| 4. Farm drainage cost a. Installation cost | xx 5,458 | : xx 2/ : xx |
| b. Maintenance cost c. Total | 6,171 | xx 7,224 |
| 5. Group drainage cost a. Installation cost b. Maintenance cost 1/ | ** 424 . 86 | xx 3/ xx xx |
| c. Total . | .510 | 423 |
| 6. Conversion cost a. Installation cost | xx 6,844 | : xx 2/ |
| b. Maintenance cost c. Total | 6,844 | xx 4,252 |

Includes loss of production, right-of-way

Discounted at 5 percent to account for estimated 20 year lag
to full installation, maintenance, and benefit accrual.

Discounted at 3½ percent to account for estimated 10 year lag
to full installation, maintenance, and benefit accrual.

TABLE I PRESENT LAND USE

| | .1 map-: Open | | | |
|--|--|--------------------|-------------------------|---|
| Zone :pir | ng unit: (Acres) | :(Acres):(Acr | es):(Acres | (Acres) |
| :. 1 | 1 5,773 2 74 2SU 5,209 4 3,839 4SU 943 1 590 1SU 5 | 521: 53: 26: | | 7,342 74 5,730 3,892 969 590 |
| Subtotal - all soi Urban Water Total Zone A | ls 16,433 | | 11 : - 15 11 : 15 | :18,602 : 111 : 15 :18,728 |
| Zone B | 1 : 218 2SU : 1,357 4SU : 268 | | | 2,105 : 1,366 : 375 |
| Subtotal - all soi Urban Water Total - Zone B | .1s : 1,843 : - : 1,843 | 2,003: | : - : 38 : 38 | : 3,846 : 38 : 3,884 |
| GRAND TOTAL - Reach 3 | 18,276 | 4,172 1 | 11 : 53 | 22,612 |

SUMMARY - TABLE II A ZONE FOR DRAINAGE CALCULATIONS ONLY COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1): (2) Soil: Land use and crop Unit: distribution | : (3) : 2/ : Acres | | (5) oduction Per Acre | (6) |
|--|---|---|--|---|
| All: Open land : Crops : Cotton : Cottonseed : Corn : Rice : Soybeans : Oats (Grain) : Oats (Sup.Past.) : Grain Sorghum : Perm. Pasture : Idle : Other 1/ : Woodland : TOTAL | 11,518 10,367 3,954 (3,954) 83 330 2,282 2,207 (492) 301 | Lbs.lint Ton Bu. Cwt. Bu. Bu. Lbs.Beef Bu. Lbs.Beef | 3/ 346 •3117 44 30 20 25 | 1,369,575 1,232,61 3,619 9,900 46,556 55,326 35,120 5,642 103,355 |

^{1/} Farmsteads, farm roads, waste and non-agricultural / Parenthetical amounts are duplicated acreages

^{3/} Calculated from Columns 3 and 6; rounded to nearest unit
L/ Total area Zone A reduced by 111 acres urban, 15 acres water,
and 4,915 acres already drained or not requiring drainage.

State: Reach: Project: Blackfish Bayou Basin: St. Francis River Arkansas

SUMMARY - TABLE III A

COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION, PROJECT PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT ZONE FOR DRAINAGE CALCULATIONS ONLY

(Based on projected prices)

| | | | | | | LLA | Soil | E |
|----------------------|------------|--------------------------------|------------------------|--------------|-----------|--|--|---------|
| TOTAL | · Woodland | : Cats (Grain) : Grain Sorghum | : Rice : Soybeans | : Cottonseed | : Crops | : Open land | tand use and cropdistribution | : (2) |
| 2,998 7 | 173 | 52 | : 589 : 220 | (2,4,15) | 2,542 | 2,825 | : Acres | : (3) |
| | Acres | Bu | Bu c | . Ton | :Lbs.Lint | ************************************** | Unit | (11) |
| | | 77 | | 3571 | 397 | | Per Acre: | (5) |
| | | 188 0156 | 17,670 | 505.31 | 561,450 | 200 m | Total | (6) |
| en ook gen konsendel | 36 | 1.53 2.53 | 2,30 | 63.00 | 22 | <u>Dollars</u> | Per Unit | 3 |
| 256,1107 | 754 | 3,100 1,353 | 12,682 | 31,834 | 110,362 | <u>Dollars</u> | Total | (8) |
| •• •• •• | 2.35 | 17.18 | : 99.96 : : 29.71 : | •• •• | 104-99: | <u>Dollars</u> : | :Per Acre: Total | : (9) : |
| 217,596 : | 404 | 2,322 893 | 58,876 | . () | 148,563: | Dollars : | Total: | (OT) |
| 38,811 5/ | 348 | 160 | 7,386 6,116 | 23,939 6/ | 23,633 5/ | Dollars | Return | (E) |

Farmsteads, farm roads, waste and non-agricultural

Parenthetical amounts are duplicated acreages.

/Includes calculated negative net return Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent Includes calculated negative net return Adjusted to eliminate negative net return.

Total area Zone A reduced by 111 acres urban, 15 acres water, 1,996 acres woodland not anticipated to be cleared, and 13,608 acres already drained, not requiring or not anticipated to be drained.

1

SUMMARY - TABLE IV A

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE CALCULATIONS ONLY (Based on projected prices)

| | •• •• | 84 84 | •• •• | • | | | * TTV | Unit: | Soil: | (I) |
|--------------------|------------|--------------------|--------------|------------|------------|----------------|------------|------------------|--------------------------|--------------|
| TOTAL | Woodland L | Grain Sorghum Idle | Oats (Grain) | Rice | Cottonseed | Crops | Open land | distribution | Land use and crop | (2) |
| 2,998 5/ | 300 | | 135 | 1403 | · (1,774) | 2,698 1,77) | 2,998 | : Acres | · 2/ | : (3) |
| | Acres | Bu. | Bu. | Cwt. | Ton | The Lint. | •• •• | : Unit : | Pro | : (4) : |
| •• •• | •• •• | . 172 | 43 :: | y W | : | · ·· | | :Per Acre: | Production | (5) : |
| | - | 1,392 | 2,845 | 201°F | 906-11 | 006-795 | t 1,5 t | Total | | (6) |
| | | 1.53 | | 3,75 | 63.00 | יי יי יי | Dollars | :Per Unit | : Value of production | : (7) |
| 383,346 | | 2,130 | 5,261 | 52,894 | 57,085 | • 277 Koa | Dollars | Total | production | 3 (8) |
| •• •• | 1 | 21.52: | 26.35 | : 111.17 : | | | Dollars | :Per Acre: Total | :Cost of p | : (9) : |
| : 322,014 : 61,332 | | 1,248: | 3,557 : | 11,802: | •• • | 200 | Dollars | | :Cost of production: Net | (10) |
| 61,332 | | 882 | 1,704 | 8,092 | 11/6/2 |),3 577 | Dollars | Return | Net | (11) |

Farmsteads, farm roads, waste and non-agricultural

Parenthetical amounts are duplicated acreages

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent Total area Zone A reduced by 111 acres urban, 15 acres water, 1,996 acres woodland not anticipated to be cleared, and 13,608 acres already drained, not requiring or not anticipated

to be drained.

SUMMARY - TABLE II B ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1) | (2) | : (3) | : (4) | : (5) | (6) |
|----------|-------------------|------------|-----------|------------|------------------|
| Soil: | Land use and crop | : 2/ | : 1 | Production | 1 |
| Unit: | | : Acres | | Per Acre | |
| 01100 | all of Louding | · ACLCG | OILLO | I CI INDIC | 10000 |
| A 77 7 . | | 4 | | | |
| All: | Open land | : 1,843 | | | |
| : | Crops | : 1,659 | • | 3/ : | The Market State |
| : | Cotton | 597 | :Lbs.Lint | 369: | 220,220 |
| : | Cottonseed | : (597) | : Ton | .3320 | 198.19 |
| : | Corn | : 12 | : Bu. | 12 | - 114- |
| | Soybeans | 201 | : Bu. | 22 | 4.420 |
| | Oats (Grain) | | | 4 ? - | |
| • | | 233 | : Bu. | 29 | 6,768 |
| 7 | Oats (Sup.Past.) | : ? (190) | :Lbs.Beef | | 15,200 |
| : | Grain Sorghum | : 59 | Bu. | 24 | 1,416 |
| : | Perm. Pasture | : 317 | :Lbs.Beef | 164 | 52,105 |
| : | Idle | : 240 | * | | |
| | Other 1/ | 184 | | | *** - *. |
| | Woodland | • | | | |
| | woodland. | 2,003 | : Acres | | |
| | TOTAL | : 3,846 4/ | | | - Chi |
| | | 23040 4 | | | |
| - | | · . | ě . | 1 | |

Farmsteads, farm roads, waste and non-agricultural Parenthetical amounts are duplicated acreages Calculated from Columns 3 and 6; rounded to nearest unit Total area Zone B reduced by 38 acres water

SUMMARY - TABLE III B

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION; VALUE OF PRODUCTION ... ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS . .

(Based on projected prices)

| 7 / 17 | TOTAL | : Woodland | Grain Sorghum Idle | : Oats (Grain) | Scybeans | Rice | : Cottonseed : : | : Cotton · : | : Crops | All: Open land :: | | Unit: distribution : | Soil: Land use and crop : | (1): (2): |
|--------|-------------------|------------|--------------------|----------------|----------|------------|------------------|--------------|---------|-------------------|------------|----------------------|---------------------------|-----------|
| | 3,454 5/ | 1,211 | 101 | . 175 | اوويل | 268 | (849) | 849 | 2,019 | 2,243 | | Acres | 2/ | (3) |
| | •• •• | Acres | Bu. | Bu. | Bu | Chrt. | : Ton | :Lbs.Lint | •• | •• | | : Unit | | (4) |
| 1,1 | | 3 7 7 | | | • • | •• | •• | •• | . 3/. | •• | | :Per Acre: Total | Production | : (5) : |
| | | | 2,666 | 7,228 | 13,594 | 4418 | 363.36 | 403,740 | | | | Total | | (6) |
| | | : 11,31 | 1.53 | 90 | 2.30 | 3.75 | : 63.00 : | 25 | ·· . | | :Dollars | :Per Unit | :Value of production | : (7) |
| | 212,537 | 13,696 | 4,079 | 6,506 | 31,266 | 33,165 | 22,891 | 100,934 | | | Dollars | Total | - | (8) |
| | | 6.52 | 22.99 | 25.22 | 31.41 | : 106-67 : | | : 124,25 : | . F | •• | :Dollars : | :Per Acre: | :Cost of production | (9) |
| | 164,385 : 148,152 | 7,896 | 2,322 | 4,413 | 15,675 | 28.588 | | 105点9 | 100 | | Dollars | Total | roduction | (OT) |
| | 1,8,152 | 5,800 | 1,757 | 2,093 | 15,591 | L.577 | | : 18,334 | | | :Dollars | : Return | Net | (11) |

Calculated from Columns 3 and 10; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent Parenthetical amounts are duplicated acreages Farmsteads, farm roads, waste and non-agricultural Total area Zone B reduced by 38 acres water and 392 acres woodland not anticipated to be cleared.

1

State: Reach: Project: Blackfish Bayou Basin: St. Francis River Arkansas

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION, ZONE FOR DRAINAGE AND FLOCD CONTROL CALCULATIONS (Based on projected prices) SUMMARY - TABLE IV B

| •• | ** ** ** ** ** ** ** ** ** | All: | (1): Soil: Unit: |
|------------------|---|-----------|---|
| TOTAL CONTRACTOR | Crops Cotton Cottonseed Rice Soybeans Oats (Grain) Grain Sorghum Idle Other 1/ Woodland | Open land | (2) Land use and crop distribution |
| 3,454 5/ | 946 1727 1727 1727 1727 1727 1727 1727 172 | 3,454 | (3) Acres |
| | Lbs.Lint Ton Cwt. Bu. Bu. Bu. | • • | (4) |
| •• •• | 1486 3/ 14375 25 141 25 | | : (5) : Production :Per Acre: |
| | 772,490 695,24 18,496 11,922 9,628 3,978 | - * | (6) |
| | 63, 25 3, 75 2, 30 2, 30 | Dollars | : (7) : (8). :Value of production :Per Unit : Total |
| 348,455 | 193,122 43,800 69,360 27,421 8,665 6,087 | Dollars | |
| | 127.98 108.92 29.79 25.21 22.44 | Dollars | : (9) : (10 :Cost of product :Per Acre: Total |
| 286,183 : 62,272 | 203,559 59,252 13,956 5,875 3,501 | Dollars : | 02 |
| 62,272 | 33,363 10,108 13,425 2,790 2,586 | Dollars | (11) net Return |

Farmsteads, farm roads, waste and non-agricultural

Calculated from Columns 3 and 6; rounded to nearest unit Parenthetical amounts are duplicated acreages

Calculated from Columns 3 and 10; rounded to nearest cent

Total area Zone B reduced by 38 acres water and 392 acres woodland not anticipated to be cleared.

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REACH SUMMARY BY SOIL MAPPING UNITS

| TOTAL | Subtotal | 2SU | | Subtotal | 1 25U 45U | | Soil Unit | |
|-----------|----------|--|-----------------------|-----------|--|--------------------------|---------------------------------|-------------------------|
| 6,452 | 3,454 3/ | 1,727 | | 2,998 2/ | 1,279 1,062 1,566 201 | | Acres | (2) |
| : 468,944 | 212,537 | 63,717 148,820 | | : 256,407 | 84,739 98,051 50,765 22,852 | | (Pro | (3) |
| 381,981 | 164,385 | \$0,140 245,041 | • | 217,596 | 76,179 80,076 42,342 18,999 | • | Production in Dollars Cost : No | Finture Without Project |
| 87,269 | 1,8,,152 | 13,577 | ZONE B - (s | 39,117 | 8,366 1/ 17,975 8,423 3,853 | ZONE A - | lars) | (5) |
| 731,801 | 348,455 | 172 ₃ 136 176 ₃ 319 | (subject to flooding) | 383,346 | 151,478 124,019 79,804 28,045 | (not subject | (Productions) | (6) : |
| 600,197 | 206, 183 | 145,061 : | ooding) | 322,014 | 131,222 102,040 65,085 23,667 | not subject to flooding) | (Production in Dollars | (7) : (7) : |
| 123,504 | 62:272 | 27,075 35,197 | | 61,332 | 20,256 21,979 14,719 4,378 | | rs) Net | (8) |
| 36,335 | : 14,120 | 13,498 622 | • | 22,215 | 11,330 1 1,001 6,296 | . , | in Net | : (9) |

os 49 as

1/ Adjusted to eliminate negative net return

Total area Zone A reduced by 111 acres urban, 15 acres water, 1,996 acres woodland not anticipated to be cleared, and 13,608 acres already drained, not requiring or not anticipated to be drained.

Total area Zone B reduced by 38 acres water and 392 acres woodland not anticipated to be cleared.

| Basin: | St. Franc | is River | : . |
|---------|-----------|----------|-----|
| Project | : Blackfi | sh Bayou | · |
| Reach: | 3 | | |
| State: | Arkansas | | |

TABLE VI LAND CONVERSIONS WITH PROJECT

| (1) | (2): | (3): | (4): | (5) |
|---------------------------|---------------|------------|---------------|-----------|
| | Total | Cost : | Cost: | Total |
| | | | Smoothing: | . , |
| Conversion = | Acres : | | | Dollars |
| Per Acre | 210100 | DOTTO | | |
| | | (0- | 30 CO- | |
| W to GC | : XX: | 60: 60: | | |
| W to IC | : XX: | 00: | XX: | XX |
| P to GC | · XX: | · xx: | | XX |
| P to IC | : XX: | XX: | | XX |
| GC to IC | XX: | | | xx |
| GC to P | XX. | xx: | | XX |
| | : | : | : | |
| | | | | |
| Project | • | | | |
| W to GC | 978: | 58,680: | 12,225: | 70.905 |
| W to IC | 406: | | | 29,435 |
| W to P | : . : | | XXX : | |
| P to GC to a control | : | , xx: | | |
| P to IC | : | xx: | ₩ \$ | |
| GC to IC | : 56: | - xx: | , xx: | • |
| GC to P | : -: | xx: | xx: | |
| | : | | : \$ | |
| Total project | : XX: | 83,040 | 17,300: | 7.00 31.0 |
| 10 ort broleco | · · · · · · | ٠٠٠٠٠٠٠ | ، المحارو الم | 1009,740 |
| Annual amortized value 2/ | XX: | xx: | xx: | 5,497 |
| | | | | |
| Total annual cost of | | | | 1. |
| conversions | : xx: | xx: | xx: | 5,497 |
| | : : | : | | |

^{1/} W-woodland; GC-general dry-farmed crops; IC-irrigated crops; (rice); P-pasture.
2/ Amortized over 50 years at 5 percent.

TABLE VII ANALYSIS OF FARM DRAINAGE SYSTEM COSTS

| | | <u>,</u> 150 | ₩ | | | | Þ | | 7.one |
|-------------|--------------------|----------------------|---------------------|---------------|--|-----------------------|-----------------------------------|---------|----------------------------------|
| * TOTAL 1/c | : Subtotal 1/ | : 2SU- General crops | : 1 - General crops | : Subtotel 1/ | : μ ~ General crops : μSU ~ General crops | : 2SU - General crops | : I ~ General crops : l ~ Rice | | : Soil mapping unit |
| 3,894 | 1 ₉ 196 | 252 | 670 274 | 2,698 | 181 181 | 956 | 748 403 | Acres | . Area |
| 56,362 | 04/1,671 | 3,781 | 11.594 | 38,422 | 5,452 | ٢4٤,64٢ | 12,943 | Dollars | Total Cost Installation 2/ |
| 5,430 | 1,,709 | 364 | 1,117 228 | 3,721 | 232 | 1,382 | 1,247 | Dollars | Annual Equivalent Instl, Cost 3/ |
| 45069 | 1,865 | 436 | 1,338 91 | 4,389 | 629 278 | 1,655 | 1,493 134 | Dollars | Annual Maintenance Cost |
| 11,01,84 | 3,5,7,7 | 800 | 2,455 | 7,910 | 9: 07.5 10: 1/57.7 | w Co | 2,740 | Dollars | Totai Armual Cost |

Does not include 10 percent "other" land includes engineering and contingency Amortized over 15 years at 5 percent.

TABLE VIII
ANALYSIS OF GROUP DRAINAGE NEEDS AND COSTS

| Item | Unit | :Amount | | Total Cost | | | | | | | |
|---|------------|---------|----------|---------------|--|--|--|--|--|--|--|
| Excavation 1/ Spreading spoil 1/ Clearing right-of-way 1/ | Cubic Yard | : : | Dollars: | | | | | | | | |
| Right-of-way easements | Acres | 10 | 30.00 | 300 | | | | | | | |
| Crossings | Each | 4: | 300,00 | 1,200 | | | | | | | |
| Swinging water gaps | Each | : 3: | 40.00 | 120 | | | | | | | |
| Pipe drop structures | Each | 2 | 200.00 | 400 | | | | | | | |
| Flap gates | Each | 2 | 100.00 | 200 | | | | | | | |
| Vegetative plantings | Acres | 4 | 8 00 | 32 | | | | | | | |
| Total construction cost | xx | : xx : | xx | 9,736 | | | | | | | |
| Engineering cost | xx | xx | жx | 974 | | | | | | | |
| Contingencies & legal | . XX | xx | xx | 974 | | | | | | | |
| Total installation cost | | | | 11,684 | | | | | | | |
| Annual equivalent - insta (amortized for 30 years | | | | 635 | | | | | | | |
| Annual maintenance cost | | 487 | | | | | | | | | |
| Annual loss of production - right-of-way 2/ : | | | | | | | | | | | |
| Total annual cost of requ | ured group | facilit | ies | 1,176 | | | | | | | |

^{1/} These items included in excavation costs under normal contract procedures.

^{2/} Annual loss of production- right-of-way. 4 acres @\$13.53 per acre.

TABLE IX
SUMMARY OF ANNUAL NET PRODUCTION RETURNS
AND ASSOCIATED COSTS

| 1 | (1) Item | (2) Total | (3) Discounted amount |
|----|---|--|------------------------------------|
| 2. | Net return with project Net return without project Gross benefit to project | Dollars 123,604 87,269 36,335 | Dollars xx xx 22,572 2/ |
| 4. | Farm drainage cost a. Installation cost b. Maintenance cost c. Total | 700 5,430 6,054 11,484 | xx <u>2/</u> xx xx 7,134 |
| 5. | Group drainage cost a. Installation cost b. Maintenance cost 1/ c. Total | xx 635 541 1,176 | xx <u>3/</u> xx xx 977 |
| 6. | Conversion cost a. Installation cost b. Maintenance cost c. Total | 5,497 5,497 | xx <u>2</u> / xx xx 3,415 |

1/ Includes loss of production, right-of-way

^{2/} Discounted at 5 percent to account for estimated 20 year lag to full installation, maintenance, and benefit accrual.

3/ Discounted at 3½ percent to account for estimated 10 year lag to full installation, maintenance, and benefit accrual.

Basin: St. Francis River
Project: Tyronza River
Reach: 1
State: Arkansas

TABLE I
PRESENT LAND USE

| Zone | | | | | : Water :Total :(Acres):(Acres) |
|------------------------------|---|-------------------------------|-------------------|----|---------------------------------|
| Zone A | 2 2SU 4SU | 530: 8,191: 426: 43: | 9: 765: -: | | 539 - 8,956 - 426 |
| Subtotal - Urban Water | - all soils : | 9,190: | 774: | 35 | 9,964 |
| Total - Zo | · • • • • • • • • • • • • • • • • • • • | 9,190: | 774: | 35 | 9,999 |
| Zone B | 2SU ; : | | 339: : 339: | | : - : 1,741 : - : 1,741 |
| Ürban Water | one B | -: -: | -: | | : 173 : 173 : 173 : 173 : 1,914 |
| GRAND TOTAL - H | Reach 1 | 10,592: | - | | 173 :11,913 |

Basin: St. Francis River Project: Tyronza River Reach: 1 State: Arkansas

SUMMARY - TABLE II A ZONE FOR DRAINAGE CALCULATIONS ONLY COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1) | (2) | : (3) | : (4) | : (5) | : (6) |
|--------|--|---|------------------------------------|-------------------------------------|--|
| Soil : | : Land use and crop | : 2/ | : P1 | roduction | |
| Unit | distribution | : Acres | Unit | Per Acre | : Total |
| All | Open land Crops Cotton Cottonseed Rice Soybeans Oats (Grain) Oats (Sup.Past.) Grain Sorghum Perm. Pasture Idle Other 1/ Woodland TOTAL | : (3,382) : 20 : 1,431 : 986 : (493) : 383 | Cwt. Bu. Bu. Lbs.Beef Bu. Lbs.Beef | •3328 30 25 30 70 23 | 1,250,640 1,125.58 600 35,712 29,330 34,510 8,809 107,300 |

Farmsteads, farm roads, waste and non-agricultural.

Parenthetical amounts are duplicated acreages Calculated from Columns 3 and 6; rounded to nearest unit Total area Zone A reduced by 35 acres urban and 818 acres already drained or not requiring drainage.

State: Arkansas Project: Tyronza River Reach: Basin: St. Francis River

SUMMARY - TABLE III A

ZONE FOR DRAINAGE CALCULATIONS ONLY

COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION

PRODUCTION COSTS AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECTED PRODUCTION (Based on projected prices)

| 角をなて | | | | | A11 | Unit | |
|--|----------------------------|----------|-----------------------|---|-----------------|------------------|--|
| Farmsteads, farm roads, waste and non-agricultural Parenthetical amounts are duplicated acreages Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent | TOTAL | Other 1/ | Soybeans Oats (Grain) | Cottonseed Rice | Open land | distribution | (2) |
| ls, waste and are duplicems 3 and 6; | 2 , 440 5 / | 233 | 243 | 1,463 | 2,323 | Acres | (3) 2/ |
| d non-agrated acres | | Acres | Bu. | Lbs Lint Ton Cwt | | Und t | (1) |
| icultural ages to nearest to nearest | | | : ₹ 28 | 3718 3718 | | Per Acre | Froduction |
| unit cent | \$.45 \$.45 \$.70 | | 7,493 8,226 | 604, 345 543, 91 | (a Taylor | Total | (6) |
| | | 2°61 | 2,30 | 65. 65. 65. 65. 65. 65. 65. | Deligi | Per Unit : Total | :Value of |
| | 211,883 | 656 | 17,234 17,403 | 151,086 34,267 | DOTTO | Total | (7) : (8) |
| A Community of the Comm | | 3,30 | 31.92 | 99.96 | No. | Per Acre: Total | : (9) : (10) : (11 :Cost of production: Net |
| • 5• | 173,136 : 38,747 | 386 | 8,554 | 157,971 | POTTOT SO TOTAL | | (10) |
| | 38,747 | 270 | 2,278 | 27,382 | . DOTTATE | Return | : (11) |

56

MEMINIT

Parenthetical amounts are duplicated accessory calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent Total area Zone A reduced by 35 acres urban, 657 acres woodland not anticipated to be cleared, and 6,867 acres already drained or not requiring drainage.

State: Project: Bagin :St. Francis River Reach: Arkansas Tyronza River

SUMMARY - TABLE IV A

OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE CALCULATIONS ONLY, COMPUTATION

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT (Based on projected prices)

| 1/ | •• •• | •• | •• | •• | •• | •• | •• | •• | •• | •• | All: | | Unit: | Soil: | (T) | |
|---|---------------------|----------|---------|---|---------------|--------------|----------|------------|------------|---------|-----------|---------------------|-----------------|--------------------------|---------|---|
| 1/ Farmsteads. farm roads. Weste and non-agricultural | TOTAL | Woodland | Other 1 | Idle | Grain Sorghum | Oats (Grain) | Soybeans | Cottonseed | Cotton | Crops | Open land | | distribution | Land use and crop | (2) | |
| ds. waste and | . 2. otho <u>5/</u> | 8 | : 2144 | 109 | 109 | · | : 219 | (1,61,41) | : 1,644 | : 2,196 | : 2,440 | •• | · Acres | 2/ | : (3) | |
| non-agr | | Acres | (| | Bu. | Bu. | Bu. | Ton | :Lbs.Lint | | •• | ••• | . Unit | •• | (4) | |
| icultural | •• •• | •• | •• | : | 28 | | 28 . | : 4579 : | 509 | . 3/: | •• | | Per Acre: | Production | : (5): | |
| | | | | | 3,052 | . 5,197 | 6,121 | 752.71 | 836,350 | | | | Total | | (6) | |
| - 01 | | •• | •• | •• | 1.53: | . 90 : | 2.30: | 63.00: | 25 | •• | •• | : Dollars : Dollars | Per Unit | :Value of production | : (7) : | 7 |
| | 279,932 | | | | 4,669 | 4,677 | 14,078 | 47,421 : | | | | Dollars | Total | roduction : | (8) | |
| | •• •• 1 | •• | •• | •• | 23.99 | 27.48: | 31.91: | •• | : 132.77 : | Į. | •• | Dollars: Dollars | Per Acre: Total | Cost of p | (9) | |
| | 231,030 : 48,902 | | | • | 2,615 | 3,160 | 6,989 | | 218,266 | | | Dollars | Total | :Cost of production: Net | : (10) | |
| | 48,902 | •• | •• | •• | 2,054 | : 1,517 | 7,089 | 44 | : 38,242 | •• | ,, | Dollars | : Return | · Net | (土) | |

armo seans tarm than sease arm morrage rentonta

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent Parenthetical amounts are duplicated acreages

Total area Zone A reduced by 35 acres urban, 657 acres woodland not anticipated to

be cleared, and 6,867 acres already drained, not requiring or not anticipated to be drained.

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Basin: St. Francis River
Project: Tyronza River
Reach: 1
State: Arkansas

TABLE II B 1/
ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS
COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1) Soil Unit | : (2) : Land use and crop : distribution | : (3) : 3/ : Acres | | (5) : oduction Per Acre: | (6) Total |
|---------------------|---|--------------------------------------|---|--------------------------------------|---|
| 250 | Open land Crops Cotton Cottonseed Soybeans Oats (Grain) Oats (Sup.Past.) Perm. Pasture Idle Other 2/ Woodland TOTAL | : (518) : 189 : 177 : (177) | Lbs.Lint: Ton Bu. Bu. Lbs.Beef: Lbs.Beef: | 385 3465 25 32 80 160 | 199,430 179,49 4,725 5,664 14,160 24,160 |

1/ One soil only; no summary required

Farmsteads, farm roads, waste and non-agricultural

Parenthetical amounts are duplicated acreages

11.41 percent cropland drained

Total area Zone B reduced by 173 acres water.

State: Project: Tyronza River Reach: Basin: St. Francis River Arkansas '

TABLE III B Y

ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT. COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION.

| | | •• | •• | | •• | •• | •• | •• | •• | •• | •• | •• | 2SU : | •• | Unit: | Soil: | (T): | |
|--------------------|----------|----------|----------|------|---------------|---------------|------------------|--------------|--------------|------------|-----------|-------|-----------|------------|-------------------|---------------------|------------------|--|
| TOTAL | TOTAL T | Woodland | Other 2/ | Idle | Perm. Pasture | Grain Sorghum | Oats (Sup.Past.) | Oats (Grain) | : Soybeans : | Cottonseed | Cotton | Crops | Open land | | distribution | Land use and crop | (2) | |
| /5 or / 6T | 12766 | 229 | 647 | 66 | 67 | 67 | (67) | 134 | 268 | (736) | 736 | 1,338 | 1,487 | | Acres | | (3) | |
| •• | 1 | : Acres | •• | •• | :Lbs Beef | Bu. | :Lbs.Beef | : Bu. | Bu. | : Ton | :Lbs.Lint | •• | •• | •• | : Unit | | (†) | |
| | | •• | | •• | 275 | 28: | : 130 : | : 42 : | 28 : | : .4275 : | : 475 : | : 1 | •• | | :Per Acre: .Total | Production | : (5) : | |
| | | ¥. | : | | 18,425 | 1,876 | 8,710 | 5,628 | 7,504 | 314.64 | 349,600 . | | | (: | .Total | | (6) | |
| • | | : 5.61 | •• | | 2005 | · 1,53 | 2005 | . 90 | 2,30 | : 63.00 | . 25 | •• | •• | : Dollars | :Per Unit | :Value of | : (7) | |
| THT CKCT : | 100 111 | 1,285 | | | 3,694 | 2,870 | : 1,746 | 5,065 | : 17,259 | : 19,822 | : 87,400 | | | Dollars | : Total | Value of production | : (8) | |
| | | 3,30: | •• | | : 38.09: | : 23.99: | : 11.83: | 25.52: | : 31.95: | •• | : 123.74: | ••• | •• | :Dollars : | Per Acre: Total | :Cost of production | : (9) : | |
| 115605 : tol 600T. | 176 00 5 | 756: | •• | •• | 2,552 | 1,607: | 793: | 3,420 : | 8,563. | •• | 91,073 | •• | | Dollars : | Total :: | roduction: | : (OL) | |
| 30,377 | 20 202 | 529 | | | 1,142 | 1,263 | 953 | 1,645 | 8,696 | | 26,249 | | | Dollars | Return | Net. | (11) | |

One soil only; no summary required
Farmsteads, farm roads, waste and non-agricultural
Parenthetical amounts are duplicated acreages

70.75 percent cropland drained

Total area Zone B reduced by 173 acres water and 25 acres woodland not anticipated to be cleared.

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State: Reach: Arkansas

TABLE IV B Y

COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION, PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT (Based on projected prices) ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS

| •• | | | | •• | | •• | | •• | 40 | 2SU : | | Unit: | Soil: | 日 |
|-----------------|----------|----------|--------------|---------------|--------------|----------|------------|-----------------|----------------|-----------|----------|----------------|---------------------|---------|
| TOTAL | Woodland | Other 2/ | Idle | Grain Sorghum | Oats (Grain) | Soybeans | Cottonseed | Cotton | Crops | Open land | | distribution | Land use and crop | (2) |
| 1,716 5/ | | 172 | . | : 77 | 108 · | 281 | : (1,112) | : 1,112 | 1,544 | 1,716 | | Acres | . | (3) |
| - | . Acres | | | Bu. | Bu. | Bu. | Ton | Lbs.Lint | | | - 0 | . Unit | | (1) |
| •• | • | | •• | 28 | . # | 28 : | : 5244. | . 564 | . A. | | •• | :Per Acre: | Production | : (5) : |
| | | | | 2,156 | 4,752 | 5,180 | 04.564 | 044,055 | | | | Total . | | (6) |
| • | • | | | 1,53 | . 90 | 2.30: | 63.00 | 25 | •• | 20. | Dollars | :Per Unit : | Value of p | (7) |
| 188,310 | | | | 3,299 | 4,277 : | 11,914: | 31,210 | 137,610 | | | Dollars | Total | production | (8) |
| • | *** | •• | | 23.99: | 26.75 | 31.95: | •• | 129.27: | •• | • | Dollars: | Per Acre: Tota | :Cost of production | (9) |
| 154,395: 33,915 | •• | •• | | 1,847: | 2,889: | 5,911: | •• | 143,748: 25,072 | 10.70 10.00 | •• | Dollars: | | oduction: | (TO) |
| 33,915 | 7 | | | 1,452 | 388 L | 6,003 | | 25,072 | | | Dollars | Return | Net | (11) |

One soil only; no summary required

Parenthetical amounts are duplicated acreages Farmsteads, farm roads, waste and non-agricultural

^{92,25} percent cropland drained

Total area Zone B reduced by 173 acres water and 25 acres woodland not anticipated to be cleared.

State: Reach: Project: Basin: St, Francis River Arkansas Tyropza River

REACH SUMMARY BY SOIL MAPPING UNITS

| 15 : 13,538 | 82.817 | : 385,425 | 168,242 | 69,121 | 281.900 | 351.024 | h.156 | TOTAL. |
|-----------------------|----------|------------------------------------|-------------------|----------|------------------------|-------------------|----------|----------|
| • | 33,915 | 154,395 | 188,310 | 30,377 | : 108,764 | | 1,716 2/ | Subtotal |
| 3,538 | 33,915 | : 154,395 | 188,310 | 30,377 | : 108,764 | 139,141 | 1,716 | 250 |
| • | • : | (subject to flooding) | . 1 | ZONE B | | | | |
| 002 : 10,155 | : 48,902 | 231,030 | : 279,932 | : 38,747 | : 173,136 | 211,883 | 在 04462 | Subtotal |
| 368 1,552 34 8,603 | 3,368 | 14,969 216,061 | 18,337 261,595 | 1,816 | 9,579 163,557 | 11,395 200,488 | 2,313 | 2 2SU |
| | ng) | ZONE A - (not subject to flooding) | A - (not sub | ZONE | •• | trien. | | |
| | : Net | tsoC 🚓 | : Gross | : Net | ss : Cost : | : Gross | : Acres | Unit |
| Difference in | ars) | (Production in Dollars) | : (Produ | ollars) | Production in Dollars) | : (Pro | •• •• | Sotl |
| (9) | 3) : | : (7) | (6) | : (5) | : (4) | (3) | : (2) | (L) |

^{1/} Total area Zone A reduced by 35 acres urban, 657 acres woodland not anticipated to be cleared, and 6,867 acres already drained, not requiring or not anticipated to be drained.
2/ Total area Zone B reduced by 173 acres water and 25 acres woodland not anticipated to be cleared.

Basin: St. Francis River Project: Tyronza River Reach: 1 State: Arkansas

TABLE VI LAND CONVERSIONS WITH PROJECT

| (1) | : (2): | . (3) : | (4) | : (5) |
|---------------------------|----------|----------|-----------------|---------|
| Merco of | ******* | Cost: | Cost | Total |
| Type of Conversion | :Total : | of : | of Smoothing | |
| | | Dollars: | | Dollars |
| Per Acre | : : : | : | | |
| W to GC | : XX: | 60: | 12.50 | : XX |
| W to IC | : XX: | - 1 | xx | XX XX |
| P to GC | : XX: | xx: | | · XX |
| P to IC | : xx: | | | XX |
| GC to IC | : xx: | | | : XX |
| GC to P | : xx: | XXX: | XX | XX |
| | | 2 | 15. | |
| Project | : | : | | |
| W to GC | : 346: | 20,760: | 4,325 | 25.085 |
| W to IC | ; | | | |
| W to P P to GC | : -: | - : | XX | |
| P to GC P to IC | :- 67: | XX: | | |
| GC to IC | | | | |
| GC to P | : | xx: | xx | • |
| | | | | - |
| Total project | : XX: | 20,760: | 4,325 | 25,085 |
| | : | | | |
| Annual amortized value 2/ | : xx: | XX: | XX | 1,374 |
| Annual maintenance | : xx: | xx: | xx | |
| | : | \$0.00 | | |
| Total annual cost of | • | : | | 3 001 |
| conversions | : XX: | XX: | XX : | 1,374 |
| 7/1/ | | • | | |

^{1/} W-woodland; GC- general dry-farmed crops;
 crops; (rice); P-pasture.
2/ Amortized over 50 years at 5 percent IC-irrigated

State: Reach: Project: Basin: St. Francis River Arkansas

ANALYSIS OF FARM DRAINAGE SYSTEM COSTS

| | | В | | | А. | | Zone |
|--------------|----------|---------------------|----------|----------------------|-------------------|---------|--|
| TOTAL | Subtotal | 2SU - General crops | Subtotal | : 2SU- General crops | 2 - General crops | | : Soil mapping unit : and land use |
| 2,674 1 | 7 827 | 478 | 2,196 1/ | 2,082 | 上 | Acres | Area |
| 911,04 | 7,171 | 7,171 | 32,945 | 31,234 | 1,711 | Dollars | Total Cost Installation 2/ |
| 3,865 | 691 | 691 | 3,174 | 3,009 | 165 | Dollars | Annual Equivalent Instl. Cost 3/ |
| 4,628 | 827 | 827 | 3,801 | 3,604 | 197 | Dollars | Annual : Maintenance : Cost : |
| 8,493 | 1,518 | 1,518 | 6,975 3 | 6,613 | 362 | Dollars | Total Annual Cost |

1/ Does not include 10 percent "other" land.
2/Includes engineering and contingency
3/Amortized over 15 years at 5 percent

Basin: St. Francis River
Project: Tyronza River
Reach: 1
State: Arkansas

TABLE IX
SUMMARY OF ANNUAL NET PRODUCTION RETURNS
AND ASSOCIATED COSTS

| 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | (1) | (2) | (3) Discounted |
|---------------------------------------|--|-------------------------|--|
| | Item | Total | Amount |
| | | Dollars | Dollars |
| 1. | Net return with project Net return without project | 82,817 69,124 | XX XX |
| 3. | Gross benefit to project | 13,693 | 10,855 1/ |
| 4. | Farm drainage cost a. Installation cost b. Maintenance cost c. Total | 3,865 4,628 8,493 | xx <u>1</u> / xx xx xx 6,732 |
| 5• | Group drainage cost a. Installation cost b. Maintenance cost c. Total | XX - | xx <u>2</u> / xx xx - |
| 6. | Conversion cost a. Installation cost b. Maintenance cost c. Total | 1,374 | xx <u>1</u> / xx xx 1,089 |

Discounted at 5 percent to account for estimated 10 year lag to full installation, maintenance, and benefit accrual.

^{2/} No group drainage; no Table VIII required

Basin: St. Francis River
Project: Tyronza River
Reach: 2
State: Arkansas

1 417

TABLE I PRESENT LAND USE

| A Comment of the Comm | | F) | * | | 6 8 147 | 1 1 6 1 |
|--|------------------------|----------------------|--------------|---|--|---------|
| the second second | :Soil map- | : Open, | *Mooded | Urban W | ater. | Total |
| Zone | :ping unit | : (Acres) | : (Acres) | : (Acre): (| Acres) | (Acres) |
| | \$ 3.45 | | | 2 2 | 1000 | |
| Zone A | : 1 1 | 8,391 | 4 2,469 | 1 - 1 | 77 Last 19 | 10,860 |
| | | 1,730 | 4 678 | | 11/1 15 | 2.408 |
| | | 14,441 | 1,348 | | 100 | 15,789 |
| | | 1.139 | : '9 | , , | J. 3. | 1,148 |
| Qualitation 1 | | | | | | |
| | ll soils | \$ 50° LOT | : 4,504 | | - 1 | 30,205 |
| Urban | | • : - | 4 - | 26 : | | 26 |
| Water | Transfer on the second | : · · - | 1 - | : | 18. | |
| Total - Zone | A , - | : 25,701 | 4,504 | 26 : | 18 | 30,249 |
| | . ^ | 3 1 9 1 1 1 1 | : | : | | |
| Zone ! B. a f | : 1 | . 7.878 | . 1,086 | : | * | 8,964 |
| | : 2 | g : g | 1 mm | | -: 1 | 9 |
| | : 2SU | 7.458 | . 2,709 | | 20 | 10,167 |
| | : 4SU | | | | The state of the s | 34 |
| Subtotal - al | | | 3,795 | | | |
| Urban : | 11 20112 | TO OFT | 1. 0,190 | | • | 19,174 |
| Water | | and the second | | min in its in the | | |
| | | • | | · Jane - | 506 | |
| Total - Zone | В | :15,379 | : 3,795 | | 506 | 19,680 |
| | 2 | 8 | 3 : 1 | : | | *30 |
| FRAND TOTAL - F | leach 2 | 41,080 | : 8,299 | 26 : | 524 | 49,929 |
| 10 * 41. 83 ** 1 | | | : | | 70.00 | 0.25 |
| | | | | | | 4 |

· 12.

Basin: St. Francis River
Project: Tyronza River
Reach: 2
State: Arkansas

SUMMARY - TABLE II A

ZONE FOR DRAINAGE CALCULATIONS ONLY

COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1): | (2) | : | (3) | : (4) | : (5) | : (6) |
|--------------|--|-----------|----------|----------|---------------------------------------|--|
| | | 1 | 2/ | : | Productio | |
| Unit: | distribution | | Acres | : Unit | :Per Acre | : Total |
| : | | 2 | 1 12 | 2 | : | : |
| A11 : | Open land | | . 22,568 | | : | : |
| *** | Crops | : 8 | 20,311 | : | : 3/- | **** |
| . '\$ | Cotton | ** | 8,058 | Lbs.Lint | : 331 | :2,663,910 |
| . : | Cottonseed | : 8 | (8,058) | : Ton | * * * * * * * * * * * * * * * * * * * | : 2,397.51 |
| | Corn | 1 8 % | 31 | 'a Bu. I | : : 45 | : 1,395 |
| | Rice | | 356 | : Cwt. | : : 30 | 10,680 |
| | Soybeans | . 2 | 5,260 | : Bu. | : 22 | : 116,210 |
| | Oats (Grain) | | 3,481 | Bu. | : : 24 | 84,780 |
| | Oats (Sup.Past.) | 8. | | | : 71 | 73,060 |
| 4 2.08 | Grain Sorghum : | | 602 | | : 21 | 12,600 |
| ź | Perm. Pasture : | . 28 - | 1,639 | | | 239,090 |
| 11:. 8 | Idle : | | 884 | | : | 371 |
| • | Other : 1/- ; | 1,40 | | :- | : | 1 45% |
| The \$ | Woodland | 3 | 4,504 | 1 Acres | : | 1 |
| 7.30 E | TOTAL : | | 27.072. | | • | * The state of the |
| Postson more | The street of th | | 4/ | 1 | | |

Farmsteads, farm roads, waste and non-agricultural
Parenthetical amounts are duplicated acreages.
Calculated from Columns 3 and 6; rounded to nearest unit
Total area zone A reduced by 26 acres urban, 18 acres water
and 3,133 acres already drained.

State: Reach: Project: Basin: St. Francis River Arkansas Tyronza River

SUMMARY - TABLE III A

ZONE FOR DRAINAGE CALCULATIONS ONLY.

COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION, PRODUCTION COSTS AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT (Based on projected prices)

| | 00 00 00 00 00 00 00 00 00 00 00 00 00 | > > > > > > > > > > > > > > > > > > > | (1) : Soil: Unit: |
|--------------------------------|--|---|--|
| Woodland I/ | Soybeans Oats (Grain) Oats (Sup.Past.) Grain Sorghum Perm. Pasture | Open land Crops Cotton Cottonseed Corn Rice | Land use and crop : distribution : |
| 191 592 1,501 7,431 7 | 761 334 (116) 252 | 5,930 5,338 2,759 (2,759) | (3) 2/ Aores |
| Acres | Bu. Lbs.Beef Bu. Lbs.Beef | Lbs Lint Ton Bu | (4) |
| | 105 s s s s s s s s s s s s s s s s s s s | | : (5) : Production :Per Acres |
| | 17,909 8,475 12,180 6,110 40,510 | 969 11 3,915 | (6) |
| 5.61 | 2005 | 63 25 45 45 | Value of product Per Unit: Total Dollars: Dolla |
| 8,420 495,431 | to to to to to | 269,199 61,054 5,677 | (8) roduction Total |
| | 28.48 17.24 9.13 21.67 | 103 39 | : (9) : :Cost of pr :Per Acre: :Dollars : |
| 4,953 | 21,672 : 5,757 : 5,460 : 5,730 : | 285,249. | Value of production :Cost of production: Net Per Unit: Total :Per Acre: Total : Ret Dollars : Dollars : Dollars :Dollars :Dollars :Dollars : Dollars : Dolla |
| 3,467 89,100 5 89,609 6 | 19,518 1,871 1,383 2,393 | 45,004 5 45,513 6 2,396 | (11) Net Return Dollars |

Farmsteads, farm roads, waste and non-agricultural

Parenthetical amounts are duplicated acreages.
Calculated from Columns 3 and 6; rounded to nearest unit
Calculated from Columns 3 and 10; rounded to nearest cent

Includes calculated negative net return

Adjusted to eliminate negative net return

Total area zone A reduced by 26 acres urban, 18 acres water, 3,003 acres woodland not anticipated to be cleared, and 19,771 acres already drained or not anticipated to be drained.

| State: | Reach: | Projects | Basin: . |
|----------|--------|---------------|-------------------|
| Arkansas | 2 | Tyronza River | St, Francis River |

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE CALCULATIONS ONLY (Based on projected prices) SUMMARY - TABLE IV A

| 1 | | | | | <i>.</i> | | • : | | | ٠ | | | ٠. | | A11 | | Unit | Soil | (1) | |
|---|-------------------|---------|----------------|----------|-----------------|-----------------|--------------------------|----------------|------------|----------|------------|--------------|------------|---------|-------------|------------|------------------|---|---------|--|
| | TOTAL | ٠, | : Other 1/ | : Idle : | . Perm. Pasture | : Grain Sorghum | ats (Sup.Past.) | : Oats (Grain) | : Soybeans | * Rice | .: Corn | : Cottonseed | : Cotton | : Crops | : Open land | | : distribution : | : Land use and crop : | : (2) | |
| | 7,431 5/ | | 742 | 247. | 287 | 125 | (124) | 429 | 952 | 807 | 99 | (3,743) | 3,743 | 6,689 . | 7,431 | | Acres | 2/ | (3) | |
| | . 7 | * Acres | •• | •• | *Lbs.Beef | : Bu. | *Lbs.Beef | · Bu. | Bu. | * Cwt. | # Bu. | : Ton | *Lbs.Lint | •• | •• | •• | . Unit | •• | : (4) | |
| | • •• | •• | ** ** ** | •• | : 298 : | 24 : | : 70 : | . 42 | 26 * | 35 | 53 | : 4790 : | 532 | 3/ 2 | | 40 | :Per Acre: | Production | : (5) : | |
| | 4, | | | | 85,485 | 3,000 | 8,680 | 17,841 | 24,753 | . 28,245 | 5,247 | 1,792,74 | 1,991,925 | | 1 | <i>.</i> | Total | | (6) | |
| | • •• | •• | ** | *** | 2005 | 1.53 | 2005 | • • 90 | 2.30 | · 3.75 | : · 1.45 : | : 63,00 : | .25 | | •• | : Dollars | Per Unit | *Value of p | : (7) : | |
| | 820,907 | | , | | 17,140 | 4,590 | 1,740 | 16,056 | 56,932 | 105,918 | 7,608 | 112,942 | 497,981 | | | Dollars | Total | Value of production : Cost of production: Net | (8) | |
| | • •• | •• | •• | ** | 40.89 : | 21.51: | \$ 5 ₀ .37 \$ | : 25.31 : | : 30,48: | : 111.17 | · 44.74 · | | : 140,47 : | : 4/ | •• | : Dollars: | :Per Acre: | :Cost of pr | : (9) : | |
| | 674,894 : 146,013 | | | | 11,735 : | 2,689 ; | 666 - | 10,857 : | 29,021 | 89,714 : | 4,429: | •• | 525,783: | •• | •• | Dollars : | Total : | oduction: | (10): | |
| | 146,013 | | | | 5,405 | 1,901 | 1,074 | 5,199 | 27,911 | 16,204 | 3,179 | | 85,140 | | | Dollars | : Return | Net | (11) | Contract of the last of the la |

Farmsteads, farm roads, waste and non-agricultural

Parenthetical amounts are duplicated acreages.

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent

Total area zone A reduced by 26 acres urban, 18 acres water, 3,003 acres woodland not anticipated to be cleared, and 19,771 acres already drained or not anticipated to be drained.

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Basin: St. Francis River
Project: Tyronza River
Reach: 2
State: Arkansas

SUMMARY - TABLE II B ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS

COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| | | | | **, ** | |
|--------|-------------------|----------|-------|------------|-----------|
| (1): | (2) | : (3) | : (4) | : (5) : | . (6) |
| Soil: | Land use and crop | : 2/ | : | Production | 1. |
| Unit: | distribution | : Acres | Unit | :Per Acre: | Total |
| : | 1,. 1 | 8 | | 1 .4 | |
| All: | Open land | : 15,379 | | : | |
| | Crops | : 13.841 | | : 3/ : | |
| . 7 8. | Cotton | : 5,181 | : | : 316 : | 1,636,035 |
| . : | Cottonseed | | : Ton | | 1.472.43 |
| | Corn | : 354 | | 4 - | 4,956 |
| | Soybeans | : 2,931 | | | 53,415 |
| | Oats (Grain) | _ | Bu. | • | |
| | Grain Sorghum | | | | 8,112 |
| , | Perm. Pasture | 1,844 | | | • |
| | Idle | 1.171 | | | 001,000 |
| | Other 1/ | 1,538 | | | |
| | | | | | |
| 8.1/1 | Voodland | | Acres | See 1 | |
| 8. | TOTAL | : 19,174 | 3 | : | |
| \$ | | 1 4/ | : | : : | |

^{1/} Farmsteads, farm roads, waste and non-agricultural
2/ Parenthetical amounts are duplicated acreages
3/ Calculated from Columns 3 and 6. rounded to necrest

3/ Calculated from Columns 3 and 6; rounded to nearest unit 4/ Total area zone B reduced by 506 acres water.

Basin: St. Francis River
Project: Tyronza River
Reach: 2
State: Arkansas

IG S

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS (Based on projected prices) SUMMARY - TABLE III B

| 1/ | | | | | | | | | | | | | All | | Jnit | oil | (1) | ı |
|--|-----|------------|-----------|------------|-------------|-----------------|----------------|----------|----------|--------------|----------|---------|-------------|----------------------------|------------------|--|-------|---|
| Farmsteads, farm roads waste and non-agricultura | •• | TOTAL | :Woodland | : Other 1/ | : Idle | : Grain Sorghum | : Oats (Grain) | Soybeans | * Rice | : Cottonseed | : Cotton | : Crops | : Open land | *** | a distribution | ; Land use and crop | : (2) | |
| S D S | 9-0 | : •• | •• | •• | •• | •• | •• | 00 | •• | •• | •• | •• | 40 | •• | •• | ** | | |
| Waste ar | Lo | 18,719 | 2,581 | 1,613 | 185 | 945 | 1,235 | 3,409 | 2,550 | (5,805) | 5,805 | 14,525 | 16,138 | | Acres | 2 | (3) | |
| Ž Z | ** | 20. | •• | •• | •• | •• | •• | ** | 40 | •• | .Lb | •• | 90 | •• | •• | | •• | |
| 708-40 | - , | | Acres | ,- : | | Bu. | Bu. | Bu. | Cwt. | Ton | Lbs.Lint | | ٠ | - | Unit | | (4) | |
| ונוטו | •• | •• | •• | •• | 04 . | •• | •• | •• | •• | •• | •• | •• | •• | •• | : Pe | Pro | ** | |
| ר פייווי ל | 4. | | | : | | .24 . | 39 | 26 | 34 | 4145 | 461 | 3/ | | | Per Acres | Production | (5) | |
| | •• | 44 | •• | ** | •• | •• | ** | •• | ** | 22 | :2,6 | •• | •• . | 40 | | ă | ** | · |
| | • | | : | | : | 22,962 | 48,005 | 87,801 | 86,700 | 2,406,00 | 673,335 | | <i>:</i> | | Total . | | (6) | |
| | ** | ** | ** | •• | •• | •• | ** | •• | •• | •• | •• | ** | 60 | •• | ₽Pe | *Ve | •• | |
| | | | | ٠, | * | | : | 23 | ca | 63 | | | | Dollars | r Ur | lue | 7) | |
| | | •• | •• | 49 | • | 1.53: | :90: | 2.30: | 3.75: | 63.001 | .25: | | | S. | Per Unit : Total | of p | (7) | |
| | | 1,43 | فسنؤ | | : | CA | 4 | 20 | - 32 | 15 | 66 | | | Dol | ; To | rodu | | ٠ |
| | | 439,795 | 14,480 | | | 35,132 | 43,204 | 201,942 | 325,125 | 151,578 | 668,334 | | | Dollars | tal | cti on | (8) | |
| | ** | 1 | | ** | •• | •• | •• | ** | 49 | 44 | •• | •• | •• | | : Pe | :Co | : (9) | |
| | | | | | | 21.69 | 23,89 | 30.36: | 108.92 | | 120.74: | 4/ | | ollars | :Per Acre: | st of | (9) | |
| | •• | :1 | •• | •• | • | • | | • | | •• | | •• | •• ` | Do | | prod | ** | |
| | | 1,140,630: | 8,518: | | • | 20,501: | 29,501 | 103,485 | 277,746: | | 700,879: | | | Dollars: Dollars : Dollars | Total : Return | alue of production : Cost of production: Net | (OI) | |
| | 4.0 | _ | ** | ** | 46 | , | - " | e | - | | | •• | •• | Do | * Re | · Ne | ** | |
| | | 299 💃 165 | 5,962 | | | 14,631 | 13,703 5 | 98,457 | 47,379 | | 119,033 | | | llars | turn | ct | | |

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Farmsteads, farm roads, waste and non-agricultural

Parenthetical amounts are duplicated acreages

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent

Total area zone B reduced by 506 acres water and 455 acres woodland not anticipated to be cleared.

Basin:
Project: St. Francis River
Reach: 2
State: Arkansas

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS (Based on projected prices) SUMMARY - TABLE IV B

| TOTAL | :Woodland :: | other 1/ | : Idle | : Grain Sorghum : | : Oats (Grain) : | s Soybbans : | Rice | : Cottonseed : | : Cotton : | : Crops | All: Open land : | | Unit: distribution : | Soil: Land use and crop : | (1): (2) |
|--------------------|--------------|----------|--------|-------------------|------------------|--------------|--------------|----------------|----------------------------|---------|------------------|------------|----------------------|---|-----------------|
| 18,7195/ | | 1,871 | 506 | 762 | 1,287 | 2,321 | 1,988 | (9,984) | 9,984 | 16,848 | 18,719 | 47 | Acres | 2/ | · · · · · · (3) |
| | Acres : | | •• | Bu ₉ | Bu. | Buo : | Cwt. | Ton : | Lbs Lint : | 54 | | | : Unit : | | (4) |
| •• •• | ••• | •• ** | •• | 26 : | .42 * | 25 + | 35 | 4616 | | 3/ | | | Per Acre: Total | Production | (5) |
| , | | | r. | 20,064 | 54,246 | 57,833 | . 69 580 · · | 4,608,88 | 120,980 | * | , | | Total | | (6) |
| | | | | 1.53 | . 90 | 2.30 | 3,75 | 63,00 | 25 | | •• | Dollars | Per Unit : | :Value of p | : (7) : |
| 2,044,064 | i i | · · | | 30,698 | 48,821 | 133,016 | 260 925 | 290,360 | :1,280,244 | ; | | Dollars | Total | roduction | (8) |
| 00 100 | •• | | *** | : 22.96 : | : 25.66. | : 29.68 | : 111.17: | • | : 137.00 : | * 4/ * | | : Dollars: | :Per Acre: Total | :Cost of pi | : (9) : |
| 1,708,226: 335,838 | # 1 *** | •• | • | 17,492; | 33,029 | 68,889: | 221,006: | • | 137,00 :1,367,810: 202,794 | | ••• | Dollars: | - | Value of production : Cost of production: Net | (10): |
| 335,838 | | | , " | 13,206 | 15,792 | 64,127 | 39,919 | | 202,794 | | | Dollars | Return | Net | (11) |

Farmsteads, farm roads, waste and non-agricultural Parenthetical amounts are duplicated acreages.

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent

Total area zone B reduced by 506 acres water and 455 acres woodland not anticipated to be cleared

Calculate Total ar

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Basin: St. Francis River
Project: Tyronza River
Reach: 2
State: Arkansas

REACH SUMMARY BY SOIL MAPPING UNITS

| TOTAL : | Subtotal : | 2SU : | Subtotal : | 2 2 2 4 3 4 3 1 | Unit : | Soil : | (1) |
|---------------------|---------------------|--|------------|--|--------------------------|-------------------------|-------|
| 26,150 | 18,719 3 | 8,8 34 9,885 | 7,431 2/ | 2,764 675 :3,667 325 | Acres | | (2) |
| :1,935,226 | 18,719 3/ 1,439,795 | : 698,422 : 741,373 | 1: 495,431 | 122,283 42,043 1294,693 136,412 | a Gross | Fut (Pr | : (3) |
| : 1,546,961 : | 1,140,630 | \$ 575,087 \$ 565,543 \$ | 406,331 | 1.06,972 34,679 234,613 30,067 | 8 Cost 8 | (Production in Dollars | (4) |
| 388,774 | 299,165 | 123,335 175,830 | 89,609 | 15,820 1/ 7,364 60,080 6,345 | ZONE A | llars) | (5) |
| 2,864,971 | 2,044,064 | 959,947 81° 1,084,117 890 | 820,907 | 266,840 101,036 408,478 44,553 | (not subject to flooding | Produ | : (6) |
| 2,383,120 : 481,851 | 1,708,226 : 335,838 | 7,228 | 674,894 a | 222,106 83,333 832,071 837,384 | 9 | (Production in Dollars) | (7) |
| 481,851 | 335,838 | 142,719 : | 146,013 | 44,734 17,703 76,407 7,169 | | | (8) |
| 93,077 | 36,673 | 19,384 | 56,404 | 28,914 1/ 10,339 16,327 824 | | Difference in | (9) |

^{1/} Adjusted to eliminate negative net return.

Total area zone A reduced by 26 acres urban, 18 acres water, 3,003 acres woodland not anticipated to be cleared, and 19,771 acres already drained or not anticipated to be drained.

Total area zone B reduced by 506 acres water and 455 acres woodland not anticipated to be cleared.

Basin: St. Francis River
Project: Tyronza River
Reach: 2
State: Arkansas

LAND CONVERSIONS WITH PROJECT

| (1) | : (2) | (3) Cost | : (4) : Cost? | (5) |
|--------------------------|--------------------|----------------|---|----------|
| im-iia | 3 mah = 3 | | of | Total |
| Type of | * Total | of Cleaning | : Smoothing | Cost |
| Conversion 1/ | : Amount | : Clearing | | Dollars |
| P 1 | Acres | Dollars . | E. DOLLARS | Dollars |
| Per Acre | *** ** ** ** ** ** | 60.00 | : 12.50 | 40 40 40 |
| W to GC | 2 XX | | : 12.50 | XX. |
| W to IC | i . xx | : 60.00 | | XX |
| W to P | * XX | 60.00 | t XX | XX |
| P to GC | * XX | xx | | XX. |
| P to IC | 2 XX | t XX | | XX. |
| GC to IC | xx | ; XX | : XX | XX |
| GC to P | * XX | ; XX | t XX | XX |
| | | | - | |
| Product | | to be a fig. | | |
| Project | 7 040 | 070 500 | 10.005 | 005 805 |
| W to GC | 3,942 | 236,520 | : 49,275 | |
| W to IC | 75 | 4,500 | : 937 | 5,437 |
| W to P | 65 | : 3,900 | : XX | 3,900 |
| P to GC | * 1 | XX . | \$1. 10 to 12 € 1 € 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | - |
| P to IC | git i Si come es e | * * * * * XX * | \$ | -e us st |
| GC to IC | | : xx | : XX | * |
| GC to P | € . • | : XX | : XX | |
| | | : | 3 | |
| Total present | | 044 000 | 50 010 | 005 170 |
| Total project | t XX | : 244,920 | 50,212 | 295,132 |
| Annual amortized walks | / - | i | · · · · · · · · · · · · · · · · · · · | 16 167 |
| Annual amortized value 2 | * xx | 2 XX | XX, | .16,167 |
| Total annual cost of | | 20 AA & 14 | ., | |
| conversions | | | 9.01 | 10 100 |
| CONTAGLISTOMS | : IX | \$.XX | \$ XX | 16,167 |
| | • | | * | 12.1 |

^{1/} W-woodland; GC- general dry-farmed crops; IC- irrigated crops; (rice); P- pasture.

^{2/} Amortized over 50 years at 5 percent

| 1/ Does not 2/ Includes | : TOTAL | :Subtotal | • 2SU | B : 1 - Gene | :Subtotal | 2SU - | * * * * * * * * * * * * * * * * * * * | A : 1 - Ge | Soil me | (1) | State: Arkansas | 1 yr onza |
|---|------------|-----------|---------------------|-----------------|-----------|--------------------------|---------------------------------------|----------------------------------|----------------|--------------|----------------------------|-----------|
| t include 10 percent "other s engineering and contingency | P | B. 1 | 2SU - General crops | General crops : | a1 | - General crops : | General crops : | General crops : Rice : Pasture : | and land use | (2) | | Kiver |
| nt "other" land. | 11,687 1/: | 4,998 1/: | 2,660 | 2,288 50 | 6,689 1/: | 3,168 132 293 | 517 : | 1,617 : 746 : 125 | Area :Inst | (3) : Total | | |
| d. 3/ Amortized | 176,717 | 79,925 | 39,905 | 39,589 . 431 . | 96,792 | 47,527 1,228 3,896 | 7,756 : 526 : | 27,978 6,439 1,163 | allation 2/ | (4) | ANALYSIS OF FARM | ŢΔ |
| | 17,024 | 7,700 | 3,844 | 3,814 | 9,324 | 4,579 118 375 | 747 51 | 2,695 620 112 | ivalent 3/ | (5) | FARM DRAINAGE SYSTEM COSTS | TARIE VII |
| over 15 years at 5 percent | 19,575 | 9,189 | 4,604 | 4,568 | 10,386 | 5,484 450 | 895 | 3,228 248 27 | nance | (6) Appropri | M COSTS | |
| | 36,599 | 16,889 | 8,448 | 8,382 59 | 19,710 | 10,063 146 825 | | 5,923 868 139 | Annual Cost | 3 (7) | | |

Basin: Project: Reach:

St. Francis River
Tyronza River

TABLE VII

Basin:
Project:
Reach:
State:

St. Francis River
Tyronza River
2
Arkansas

TABLE VIII
ANALYSIS OF GROUP DRAINAGE NEEDS AND COSTS

82.00%

1 1 m 1 m 1 1 m

| Item Excavation 1/ | Unit : | -Amount | Cost Dollars | |
|--|--------------|--|------------------------------------|--------------|
| Spreading spoil 1/ Clearing right-of-way 1/ | Cubic Yard: | 37,960 | 0.20 | 7,592 |
| Right-of-way easements | Acres | 6 | 30,00 | 180 |
| Crossings | Each | 4 | 300,000 | 1,200 |
| Swinging water gaps | Each | 6 | 40.00 | 240 |
| Pipe drop structures | Each | 4. 1. 4. | 200.00 | 800 |
| Flap gates | Each | j 5 | 100.00 | 500 500 |
| Vegetative plantings | Acres | 5 | 8.00 | • 30 • 40 |
| Total construction cost | t xx. | XX - | , , , , , , | 10,552 |
| Engineering cost | : xx : | ~ , , , , , , , , , , , , , , , , , , , | | 1,055 |
| Contingencies and legal | xx : | XX | XX | 1,055 |
| Total installation cost | | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | 12,662 |
| Annual equivalent - installati (amortized for 30 years at | | | tea, trill Bunchitas Barrata | 688 |
| Annual maintenance cost | | 1.74 The Control of t | | 528 |
| Annual loss of production - ri | ight-of-way | 2/ | | 30 |
| Total annual cost of required | group facili | ties | 1 | 1,246 |

^{1/} These items included in excavation costs under normal contract procedures.

^{2/} Annual loss of production - right-of-way. 2 acres @ \$14.87 per acre.

Basin: Project: Reach: State: St. Francis River
Tyronza River
2
Arkansas

TABLE IX SUMMARY OF ANNUAL NET PRODUCTION RETURNS AND ASSOCIATED COSTS

| (1) | 3 (2) | 1 (3) |
|---|------------------------------|-----------------------------|
| Item | t Total Dollars | Discounted Amount Dollars |
| Net return with project Net return without project Gross benefit to project | 481,851 388,774 93,077 | xx xx 57,821 2/ |
| 4. Farm drainage cost a. Installation cost b. Maintenance cost c. Total | 17,024 19,575 36,599 | xx 2/ xx xx 22,736 |
| 5. Group drainage cost a. Installation cost b. Maintenance cost 1/ c. Total | 688 558 1,246 | xx 3/ xx xx 1,035 |
| 6. Conversion cost a. Installation cost b. Maintenance cost c. Total | 16,167 16,167 | xx 2/ xx xx 10,043 |

Includes loss of production, right-of-way

Discounted at 5 percent to account for estimated 20 year lag
to full installation, maintenance, and benefit accrual.

Discounted at 3½ percent to account for estimated 10 year lag
to full installation, maintenance, and benefit accrual.

Basin: St. Francis River
Project: Tyronza River
Reach: 3
State: Arkansas

TABLE I PRESENT LAND USE

| | A 14 | | | 767 | | 717 | |
|------------------|-------|-------|-------------------|----------|-------------|--------------|--------------|
| 4 91 | | | | | : Urban: | | |
| Zone | *ping | unit: | (Acres) | : (Acres |): (Acres): | (Acres) | (Acres) |
| | : | : | | 8 | : | - | |
| ·Zone A | : 1 | : | 9,028 | * 787 | : - : | • 4 | : 9,815 |
| | 1 2 | | 3,748 | : 9 | : - : | — . ' | : 3,757 |
| | : 3 | | 33,115 | : 278 | : - : | | : 33,393 |
| | . 4 | | 4,591 | | : - : | | 4,600 |
| | : 11 | | 2.800 | | : | | 2,800 |
| Subtotal - all | | | | | | | |
| | SOLIS | 5 " | 00,202 | :1,083 | 3 - 3 | - | 54,365: |
| Urban | * * | \$ | - | : - | : 175 : | - | : 175 |
| Water | | | - | : - | : : | 181 | : 181 |
| Total - Zone | Α . | | 53,282 | :1,083 | : 175 : | 181 | : 54,721 |
| | 1 | . : | | | : -1 | | 5 ' ' |
| Zone B | i I. | | 7,620 | \$ 852 | : - : | - | : 8,472 : |
| | | U : | . 9. | | 1 - 1 | - | 9 |
| | | | .2,045 | | : - : | | 2.045 |
| Subtotal - all | | | | | | | |
| • | SOLIS | • | 3,014 | \$ 852 | 3 77 8 | | :10,526 |
| Urban | | | • | * | * 17 * | | 17 |
| Water | | | (c) | | | 254 | : 254 |
| Total - Zone, | B . | | 9,674 | :852 | : 17 : | 254 | :10,797 |
| 9 | | | The second second | * | 1 1 | | 1 |
| GRAND TOTAL - Re | ach 3 | | 62.956 | :1.935 | : 192 : | 435 | :65.518 |
| | | , | 1 | | | | • |
| | | | | • | | 1 | |

Basin: St. Francis River
Project: Tyronza River
Reach: 3
State: Arkansas

SUMMARY - TABLE II A ZONE FOR DRAINAGE CALCULATIONS CNLY COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1) | : (3) | : (4) | : (5) : | (6) |
|--------------------------|------------|------------------|---------------------|-----------------|
| Soil : Land use and crop | : 2/ | 1 | Production | |
| Unit: distribution | . Acres | : Unit | Per Aores | Total |
| 1 | 1 | 1 | : : | |
| All: Open land | 49,877 | 8 to 1 to 2 to 3 | 8 th. 10 1000 V 100 | ates and the of |
| s Crops | 44,890 | 1 | 3/ 1 | |
| Cotton | 16,534 | :Lbs.Lint | 332 | 5,490,125 |
| :: Cottonseed | : (16,534) | I Ton | 2988 | 4,941.12 |
| * Corn | 776 | | 39 : | 30,309 |
| Rice | 162 | : Cwt. | 30 : | 4,860 |
| | | | | |
| * Soybeans | : 12,423 | Bu. | : 20 : | 248,250 |
| : Oats (Grain) | 9,322 | a Bu | 24 : | • |
| oats (Sup.Past.) | | Lbs. Beef | | |
| grain Sorghum | 368 | & Bu. | 19: | 7,169 |
| Perm. Pasture | 3,325 | :Lbs.Beef | : 171 : | 568,435 |
| i Idle | 1,980 | \$ 1 × 1 × 1 | : -1 | • |
| t Other 1/ | 4 987 | 1 - | : : | |
| :Woodland | 1,083 | 1 Acres | 1 1. | |
| TOTAL | 50,960 | 1 | 1 1 | , |
| | 4/ | 1 | | |
| | | | - | |

Farmsteads, farm roads, waste and non-agricultural
Parenthetical amounts are duplicated acreages.

Calculated from Columns 3 and 6; rounded to nearest unit
Total area zone A reduced by 175 acres urban, 181 acres water,
and 3,405 acres already drained or not requiring drainage.

and the second of the second o

English Was a training of

State: Reach: Project: Basin: St. Francis River Arkansas Tyronza River

SUMMARY - TABLE III A

ZONE FOR DRAI NAGE CALCULATIONS ONLY

COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION, PRODUCTION COSTS AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT

(Based on projected prices)

| 2/2 | | - 1 | | | | | | | | | | | | | | All | | Unit | Soil | (1) | |
|---|-----------------------------------|-----------|---------|----------|---------------|-----------------|----------------------|----------------|------------|-------------|----------|--------------|-----------|-----------|---------|-------------|-------------------|---------------------------|---|--------------|---|
| Farmsteads, farm roads, waste and non-agricult Parenthetical amounts are duplicated acreases. | | *Woodland | other 1 | * Idle : | Perm. Pasture | : Grain Sorghum | : Oats (Sup.Past.) : | a Oats (Grain) | * Soybeans | Rice | • Corn | : Cottonseed | | : Cotton | : Crops | : Open land | | a distribution | : Land use and crop | 3 (2) | |
| farm roads, waste and non-agricultural al amounts are duplicated acreares. | 10,210 7 | 359 | 984 : | . 267. | 606. | 317 | (341) | 930 | 1,833 | 200 | 55 | (4,659) | | 4,659 | 8,867 | 9,851 | | Acres | 2/ | (3) | |
| nd non-agri cated acrea | . 6 | * Acres | •• | . •• | *Lbs.Beef | Bu. | :Lbs.Beef | . Bu. : | Bu. | . Cwt. | Bu. | : Ton: | | :Lbs.Lint | | •• | | * Unit | • | : (4) | |
| cultural res | •• •• | •• | •• | •• | 195 : | 24 * | : 100 : | : 27 : | 22 : | 30 • | 45 : * | : .3295 : | | 366 | 3/: | •• | | :Per:Acre: | Production | : (5) : | |
| | | | | | 118,030 | 7,608 | 33,985 | 25,313 | 40,645 | 6,000 | 2,458 | 1,534,99 | | 1,705,545 | | .• | | Total | | (6) | |
| | ·• •• | : 5.61 | •• | •• | \$ 2005 | 1.53 · | 2005 | . 06. | 2.30 | 3.75 | 1.45 | : 63.00 | ** | | •• | •• | : Dollars | Per Unit | : Value of production : Cost of production: Net | : (7) | - |
| | 709,552 | 2,014 | | | 23,665 | 11,640 | 6,814 | 22,782 | 93,483 | 22,500 | 3,564 | 96,704 | | 426 386 | | | · Dollars | : Total | production | (8) | |
| | | 3.30 : | •• | •• | : 27.19: | : 21.51 s | 8.55 | : 18,03 : | : 27.70: | : 99.96 : | : 37.49: | •• | •• | : 98,20 : | : 4/ : | | :Dollars : | :Per Acre: Total : Return | :Cost of p | : (9) : | |
| | 574,535 :] | 1,185: | • | •• | 16,480: | 6,819; | 2,917 | 16,769: | 50,777% | 19,992: | 2,062 | · . | •• | 457,534: | • | * | Dollars : Dollars | Total : | roduction: | (10) : | |
| | 574,535;135,017 5/ :136,488 6/ | 829 | | | 7,185 | 4,821 | 3,897 | 6,013 | | 2 508 0 | 1,502 | | 67,027 6/ | 65,556 5/ | . • | | Dollars | Return | Net | (11) | |

Calculated from Columns 3 and 10; rounded to nearest cent Calculated from Columns 3 and 6; rounded to nearest unit

Includes calculated negative net return Adjusted to eliminate negative net return

Total area zone A reduced by 175 acres urban, 181 acres water, 724 acres woodland not anticipated to be cleared, and 43,431 acres already drained, not requiring or not anticipated to be drained.

Basin: St. Francis River
Project: Tyronza River
Reach: 3
State: Arkensas

SUMMARY - TABLE IV A

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE CALCULATIONS ONLY

(Based on projected prices)

| 1/ | | | | | • | | | | | | | : | , | | A11 | | Unit | Soil | (1) |
|--|------------------------|--------------|---------|----------|-----------------|----------------|---------------------|------------------|------------|------------|------------|------------------|------------|---------|-----------|---|------------------|--------------------------|--------------------------|
| Farmsteads farm roads waste and non-acricultural | TOTAL | * Moodland : | other 1 | · Idle : | Perm. Pasture : | Grain Sorghum: | : Oats (Sup.Past.): | · Oats (Grain) · | Soybeans : | nice . | Corn : | : Cottonseed : : | : Cotton : | * Crops | Open land | • | s distribution : | Land use and crop : | (2) |
| ds waste a | 10,210 ₅ /: | 1 | 1,020 | , | 646 | 322 | | | 1,880 | 224 | . 55 | (4,822) | 4,822 | 9,190 | 10,210 | | Acres | 2/ | (3) |
| nd non-ser | | Acres | | • | *Lbs.Beef | Bu. | aLbs.Beef | Bu. | Bu. | Cwt. | . Bu. | Ton | *Lbs.Lint | • | *** | *************************************** | Unit . | | 1 (4) |
| i out time | | •• | 2 | ** | 300 : | 24 . | s. 113 . s | 44 3 | 27 : | 35. | 62. | :,4576. : | 508. | 3 | | *** | Per Acres | Production | : (5) : |
| | | | | | 193,570 | . 7,728 | : 69,990 | 42,010 | 50,168 | 7;840 | . 3,397 | : 2,206,31 | 2,451,465 | * | • | • | Total | | · · (0) · · |
| | | | ; | | . 2005 | 1.53 | 2005 | 90 | 2.30 | 3.75 | 1.45 | \$ 63.00 | 25 | | | Dollars | Per Unit | *Value of | * (7) |
| | 1,004,053 | , | | | 38,812 | 11,824 | 14,033 | 37,809 | 115,386 | 29,400 | 4,926 | 138,998 | 612,865 | | | Dollars | Total | production | (8) |
| | | •• | · · | | \$ 41.11 T | * 21.51 * | : 10.01: | : 26,49 : | : 30, 98 : | : 111.17 : | \$ 54.00 : | | : 132,45 | * 4 | *** | :Dollars : | Per Acres Total | Cost of p | : (9) : |
| | 790,015: 214,038 | • | 2 | | 26,557: | 6 926 | 6,188: | 25,562: | 58,242 | 24,902: | 2,970: | | 638,668 | | | Dollars :I | H | *Cost of production: Net | (10) : |
| - 1 | 214,038 | | | | 12,255 | 4,898 | 7,845 | 12,247% | 57,1440 | 4,498 | 1,956 | | 113, 195 | | | Dollars | : Return ~ | Net | (11) |

Farmsteads, farm roads, waste and non-agricultural Parenthetical amounts are duplicated acreages

Calculated from Columns 3 and 6; rounded to nearest unit. Calculated from Columns 3 and 10; rounded to nearest cent.

Total area zone A reduced by 175 acres urban, 181 acres water, 724 acres woodland not anticipated to be cleared, and 43,431 acres already drained, not requiring drainage or not anticipated to be drained.

Basin: St. Francis River
Project: Tyronza River
Reach: 3
State: Arkansas

SUMMARY - TABLE II B

ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS

COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| | • | | |
|---------------|-----------------------|----------|--------------------------------|
| (1): Soil: | (2) Land use and crop | · · ·(3) | : (4) : (5) : (6) : Production |
| | | | |
| Unit: | distribution : | Acres | : Unit : Per Acres Total |
| : | | | : . |
| All: | Open land | 9,674. | : |
| : | Crops : | 8,707 | : 3/ : |
| : | Cotton : | 3,462 | <u> </u> |
| : | Cottonseed : | (3,462) | : Ton : .2251 : 779.19 |
| : | Soybeans : | 2,470 | Bu. : 15 : 37,466 |
| : | Oats (Grain) | 1.743 | : Bu. : 17 : 29.382 |
| : | Oats (Sup.Past.): | (83) | :Lbs.Beef: 70 : 5,810 |
| : | Perm. Pasture | 317 | :Lbs.Beef: 157 : 49,850 |
| : | Idle : | 715 | : : |
| : | Other 1/ : | 967 | |
| :1 | Woodland : | 852 | : Acres : |
| : | TOTAL | 10,526 | 4 |
| | | 4 | |
| | • | | • • |

Farmsteads, farm roads, waste and non-agricultural
Parenthetical amounts are duplicated acreages.

Calculated from Columns 3 and 6; rounded to nearest unit
Total area zone B reduced by 17 acres urban and 254 acres water.

State: Reach: Project: Basin: St. Francis River Arkansas Tyronza River

SUMMARY - TABLE III B

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITHOUT FROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS (Based on projected prices)

| Townstoods form was | * TOTAL | *Woodland | tother 1/ | : Idle | Perm, Pasture | : Oats (Sup.Past.) | ats (Grain) | Soybeans | # Rice | * Cottonseed | * Cotton | * Crops | All: Open land | ** | Unit: distribution | Soil: Land use and crop | (1) : (2) |
|---------------------|------------------|--------------|-----------|--------|----------------|--------------------|-----------------|----------------|-----------------|--------------|------------------|---------|----------------|-----------------------------|--------------------|--|------------------|
| 2 2 2 2 2 2 2 | 10,3225/ | 307 | 1,001 | .450 | # #26 | * (362) | 1,260 | : 2,161 | 215 | 1 (4,602) | 4,602 | 9,014 | : 10,015 | •• | . Acres | 2/ | a (3) |
| | •• •• | * Acres * | •• | •• | *Lbs.Beef* | *Lbs.Beef* | * Bu | Bu. | a Cwt. | Fon | aLbs.Linta | | •• | | . Unit :Pe | Pro | : (4) : |
| | | •• | • | •• | 260 | 72 : | 33 | . 22 | 33 * | .3818 : 1 | ** | 3 | •• | •• | :Per.Acre:: Total | Production | (5) : |
| | | | | 49 | •• | •• | 41,800 : | •• | •• | L,757,05 : 6 | 1,952,280 | •• | 4. | : Do | | : *Val | (6) : (|
| | : 795 | 5.16: 1 | •• | •• | 2005 : 17 | 2005 : 5 | .90 s 37 | ** | 3.75 : 26 | ** | ·25 : 488 | | | : Dollars: Dollars | Per Unit: Total | ue of produ | 7) : (8) |
| | ,571 : | 1,722 : 3, | •• | •• | ••• | 5,214 : 5, | 70 | •• | 26,606 : 106.67 | 110,694 1 | 488,069 : 111 | | •• | | al :Per Acre: | ction : Cost |) : (9) |
| | : 638,27 | 3.30: 1,013: | •• | •• | 36.29 : 11,829 | 5,57 : 2,015 | 20.82 : 26,228 | 27,56 : 59,554 | .67 : 22,934 | •• | 111.84 : 514,705 | 4/ : | •• | Dollars : Dollars : Dollars | Acre: Total | *Value of production : Cost of production: Net |) : (10) |
| | 638,278 :157,293 | 3 : 709 | •• | •• | 9 1 5,186 | ** | 8 : 11,3921 | 4 : 49,077% | •• | • | 5 84,058 | •• | •• | s : Dollars | :Return | on:Net | : (11) |

farmsteads, farm roads, waste and non-agricultural

Calculated from Columns 3 and 6; rounded to nearest unit Parenthetical amounts are duplicated acreages.

Total area zone B reduced by 17 acres urban, 254 acres water, and 204 acres woodland not anticipated to be Calculated from Columns 3 and 10; rounded to nearest cent

cleared.

State: Reach: Project: Basin: St. Francis River Arkansas Tyronza River

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS (Based on projected prices) SUMMARY - TABLE IV B

| TOTAL | Perm. Pasture : Idle : | ats (Grain) : Oats (Sup. Past): | Soybeans | Cottonseed | All: Open land : Crops : | 1 | (1): (2): Soil: Land use and crop: Unit: distribution: |
|-----------------|------------------------|--|---------------------|---------------------------|--------------------------|------------|--|
| 10,3225 | 334 278 | 1,301 (375) | 2,231 | 4,923) | 9, 290 | | (3) Acres |
| Acres | *Lbs.Beef | Bu. | Bu. | * Ton | ** | ** | : (4) : Unit |
| | 287 | 39 | 24 | • 44 | 3 | - | : (5) Production Per Acre |
| <u>'</u> | 95,740 | : 50,363 : 32,970 | 2, 52, 793 | : 2,431,245 : 2,188,12 | •• •• | | (6) |
| on on an | 2005 | 3: .90 | 3 : L.45 2.30 | | 00 60 | : Dollars: | : (7) : :Value of :Per Unit: |
| 948,890 | 19,196 | 45,3266,611 | : 121,424 | : 607,811 : 137,851 | •• •• | 1 | productio |
| 00 00 00 00 | 39.52 | 23,64 7,29 | 27.78 28.75 | : 131,20 : | 4 | Dollars | : (7) : (8) : (9) : (10) : (!Value of production : Cost of production: Net :Per Unit: Total :Per Acre: Total :Ret |
| 762,939 185,951 | 13,201 | 30 ,759 2 ,735 | 64,139 | တ္ | | Dollars | (10) : (11) production: Net Total :Return |
| 185,951 | 5,995 | : 14,567° : 3,876 | • 4,476 • 57,285 | 99,752 | •• | Dollars | (11) Return |

Parenthetical amounts are duplicated acreages. Farmsteads, farm roads, waste and non-agricultural

Calculated from Columns 3 and 10; rounded to nearest cent Calculated from Columns 3 and 6; rounded to nearest unit

Total area zone B reduced by 17 acres urban, 254 acres water, and 204 acres woodland not anticipated to be cleared.

State: Reach: Project: Basin: St. Francis River
Tyronza River Arkansas

> REACH SUMMARY BY SOIL MAPPING UNITS TABLE V

| 1/ Adj | TOTAL : | Subtotal : | И Н | Subtotal : | ₩ 44 ••••• | ~ | | Unit : | 2. 2. | (1) |
|---|--------------|------------|--|-----------------|---------------------------------|--------------------------------|---------|-----------------|---|---------|
| usted to el | 20,532 | 10,322 3/ | 8,268 2,054 | 10,210 2/ | 5,964 872 | 2,484 | | Acres | | (2) |
| imin | 40 40 0 | | | • | | 40 40 | | | • •• | |
| Adjusted to eliminate negative net return | 1,505,123 | 795,571 | 600,548 195,023 | 709,552 | 451,130 77,622 | 111,479 69,321 | | Gross | Putur (Prod | (3) |
| e ne | -0 00 Jud | | • •• •• | 00 40 | '00 00 | ** ** | 40 | 40 | e Wi | * |
| t return | 1,212,813 | 638,278 | 483,596 154,682 | 574 535 | 354,999 59,740 | 103,785 | - | Cost | Future Without Project | (4) |
| | . 2 | ۰۰۰۰۰ | | ه. ده سر | | 00 96 | •• | 40 | ject | |
| | 293,781 | 157,293 | 116,952 40,341 | 136,488 | 96,131 17,882 | 9,165 1/ 13,310 | , OME V | Net | " ت | (5) |
| | 1,952,943 | 948,890 | 739,863 : 596,53 : 209,027 : 166,41 | 1,004,053 · | 561,086 106,464 | 236,516 : 99,987 : | | : Gross | Future (Producti | : (6) : |
| | 1,552,954 | 762,939 | 596,521 : 166,418 : | 790,015 | 436,476 8 2,468 9 | 516 : 190,532 : 987 : 80,539 : | + 57 | Cost | Future With Project Production in Dollars | (7) |
| | 399,989 | 185,951 | 143,342 42,609 | 214,038 | 124,610 23,996 | 45,984 19,448 | | Net | <u>ر</u> | (8) |
| | 106,208 | 28,658 | 26,390 | * 77,550 | 28,479 St | 36,819 <u>1</u> / | •• | *Net Production | :Difference in | : (9) |
| | | | | | -0.7 | | | | | |

100/ 13 Total area zone B reduced by 17 acres urban, 254 acres water, and 204 acres woodland not anticipated to Total area zone A reduced by 175 acres urban, 181 acres water, 724 acres woodland not anticipated to be cleared, and 43,431 acres already drained not requiring drainage or not anticipated to be drained. be cleared.

Basin:
Project:
Reach:
State:

St. Francis River
Tyronza River
3
Arkansas

TABLE VI LAND CONVERSIONS WI TH PROJECT

| (1) | (2) \$ | (3) | : (4) | (5) |
|-------------------|--------------------|----------|--------------------|-----------|
| | : | Cost | : Cost | |
| Type of : | Total : | of | s of | Total |
| Conversion 1/ : | Amount: | Clearing | :Smoothing : | Amount |
| | Acres : | Dollars | : Dollars | Dollars |
| | * | · · | * | |
| Per Acre | : | | : | |
| W to GC | xx s | 50 | : 15 | xx · |
| W to IC | · xx : | 50 | : 15 | xx |
| W to P | xx : | 50 | : xx | xx |
| P to GC: | xx : | xx | : 00 | xx ··· xx |
| P to IC | " " XX ": | · · xx | \$0 0 10 10m 1 0 1 | · ~ xx |
| GC to IC | xx : | xx | : xx | xx · |
| GC to P | xx : | xx | : xx | xx |
| \$ | | | : | |
| * \$* | * * * * * * * | 7 | ** * | 1 |
| Project : | 2 | | : | |
| W to GC | 594 : | 29,700 | : 8,910 | 38,610 |
| W to IC | 24 : | 1,200 | 360 | 1,560 |
| W to P | 48 : | 2,400 | s xx | 2,400 |
| P to GC | - 1 | xx | : 400 | G mar |
| P to IC | - : | xx | : 0 | - |
| GC to IC | - : | хx | * XX | 4 |
| GC to P | · · · | ×× | 3. · XX | |
| | : | | : | |
| • | : | | 1 | |
| Total project | xx : | 33,300 | 9,270 | 42,570 |
| * | : | | : | |
| Annual amortized: | ** * * * * * * * * | | \$ | |
| value 2/ | xx : | xx | : XX | 2,332 |
| | : | • | : . | |
| Total annual cost | *1 1 | ٥ | * | |
| of conversions : | xx : | xx | : xx | 2,332 |
| | : | • | | |
| | | | | |

^{2/} Amortized over 50 years at 5 percent

| 2/ In | | | | ₩ | | | | | | А | Zone | (1) | Basin: Project: Reach: State: |
|--|-----------|-----------|--------------------------------------|-------------------------------|-----------|--------------------------------------|-------------------------------|----------------------------------|--|---------------------|--------------------------------|-------------------|--|
| Does not include 10 percent Includes engineering and con | * TOTAL | :Subtotal | : 3 - General crops : 3 - Pasture | 1 - General crops 1 - Pasture | :Subtotal | : 4 - General crops : 4 - Pasture | 3 - General crops 3 - Pasture | 2 - General crops 2 - Pasture | · 1 - Pasture | : 1 - General crops | Soil mapping unit and land use | : (2) | St. Francis River Tyronza River 3 Arkansas |
| percent "other" land and contingency | 11,765 1/ | 2,575 1/ | 369 | 2,117 | 9,190 1/ | 761 | 5,153 | 729 | 33 C C C C C C C C C C C C C C C C C C | Acres 1,677 | · Area | 1 (3) | ANAL |
| 3/ Amortized o | 190,996 | 43,841 | 6,384 | 36 ₉ 630. | 147,155 | 10,120 195 | 89,162 2,001 | 10,937 | 1,955 3,119 | Dollars 29,017 | Cost Installation 2 | (4) Tot al | TABLE VII ANALYSIS OF FARM DRAINAGE |
| over 15 years at | 18,400 | 4,223 | 615 | 3,529 | 14,177 | 975 | 8,590 | 1,054 | 300 | Dollars 2,795 | Equivalent 3/ | (5) Annual | VII INAGE SYSTEM COSTS |
| 5 percent | 25,054 | 5,240 | 982 | 4,227 | 19,814 | 1,168 | 13,717 154 | 1,262 | 72 | Dollars 3,348 | * Maintenance | : (6) : Annual | TS |
| | 43,454 | 9,463 | 1,597 | 7,756 72 | 33,991 | 2,143 | 22,307 | 2,316 | 372 | Dollars 6,143 | Annual Cost | (7) | |

Basin:
Project:
Reach:
State:

St. Francis River
Tyronza River
3
Arkansas

TABLE VIII ANALYSIS OF GROUP DRAINAGE NEEDS AND COSTS

| | : : | | : Unit | Total |
|---|----------------|--------|---------------|---------------|
| Item | * Unit : | Amount | : Cost | Cost |
| Excavation $\frac{1}{2}$ Shaping or spreading spoil $\frac{1}{2}$ Clearing right-of-way $\frac{1}{2}$ | : Cubic Yard: | 28,350 | Dollars O.20 | Dollars 5,670 |
| Kight-of-way easements | Acres : | 4 | 30.00 | 120 |
| Crossings | Each: | 3 | 300.00 | 900 |
| Swinging water gaps | Each : | 5 | 40.00 | 200 |
| Pipe drop structures | Each | 3 | 200.00 | • 600 |
| Flap gates | Each : | 4 | : 100.00 | 400 |
| Vegetative plantings | * Acres | 3 | 8.00 | 24 |
| Total construction cost | : XX 2 | XX | : XX | : 7,914 |
| Engineering cost | : xx : | xx | t xx | : 791 |
| Contingencies and legal | : xx : | xx | : xx | 791 |
| Total installation cost | | | | 9,496 |
| Annual equivalent - installati (amortized for 30 years a | | | | : : 516 |
| Annual maintenance cost | | | •. | 396 |
| Annual loss of production - ri | ght-of-way | 2/ | | : 14 |
| Total annual cost of required | group faciliti | es | | : 926 |
| | | | | : |

^{1/} These items included in excavation costs under normal contract procedures.

^{2/} Annual loss of production - right-of-way. 1 acre @ \$14.31 per acre.

Basin: Project: Reach: State: St. Francis River
Tyronza River
3
Arkansas

TABLE IX
SUMMARY OF ANNUAL NET PRODUCTION RETURNS
AND ASSOCIATED COSTS

| | (2) | : (3 | |
|----------|------------------|---|--|
| | : | : Discou | nted |
| | : Total | : Amount | |
| | Dollars | : Dollar | s |
| roject | 399 . 989 | : * | x |
| | | 4 7 | x |
| project | 106,208 | 84,19 | 2 2/ |
| t | ; xx | : 1 x | x 2/ |
| | • | | |
| | . • | | |
| | | | |
| | * 40°404 | 1 04,44 | .0 |
| st | xx | * * X | x 3/ |
| cost · | : 516 | \$ X | x — |
| ost 1/ | 410 | 1 X | x |
| - | | , - | |
| ., | 1 | • | |
| | 1 XX | 2 X | x 2/ |
| cost | | | COUNTY CO. |
| | 1 | | _ |
| | 2 779 | | |
| | . 2,002 | 1,04 | 7 |
| | t cost ost | Dollars roject 399,989 t project 293,781 project 106,208 t xx cost 18,400 ost 25,054 43,454 st xx cost 516 ost 1/ 410 926 xx cost 2,332 | Total Amount Dollars Dollar roject 399,989 x t project 293,781 x project 106,208 84,19 t xx x cost 18,400 x ost 25,054 x 43,454 34,44 st xx x cost 516 x ost 1/ 410 x 926 76 |

Includes loss of production, right-of-way

Discounted at 5 percent to account for estimated 10 year lag
to full installation, maintenance, and benefit accruale

Discounted at 3½ percent to account for estimated 10 year lag
to full installation, maintenance, and benefit accruale

Basin: Project: State: St. Francis River Fifteen Mile Bayou Arkansas

TABLE I PRESENT LAND USE

| | :Soil map- | | | | | |
|---------------|------------|---|-----------|----------|------------|----------|
| Zone | :ping unit | : (Acres) | : (Acres) | : (Acres | : (Acres | (Acres) |
| 2 | : | * | : | : | : | : |
| Zone A | : 1 | | :12,764 | | : - | : 45,947 |
| | : ISU | : 3,755 | | | : - | : 4,198 |
| | : 2 | : 3,338 | | : - | : - | : 3,438 |
| | : 2SU | :27,059 | | : - | : - | : 28,136 |
| | : 4 | :11,661 | | : - | : - | : 11,761 |
| | : 4SU | : 1,656 | | : - | : - | : 1,701 |
| | : 11 | : 271 | - | : - | : - | : 271 |
| | : 11SU | : 172 | | 1 - | : - | : 172 |
| Subtotal - | all soils. | 81,095 | :14,529 | | : - | : 95,624 |
| Urban | | 1 - | : - | : 280 | : - | : 280 |
| Water | | : - | : - | : - | : 3,520 | |
| Total - Zon | ie A | :81,095 | :14,529 | : 280 | : 3,520 | : 99,424 |
| | | 1 | : | : | : | : |
| Zone B | : 1 | : 1,358 | | : - | : - | : 1,618 |
| | : 1SU | : 1,104 | | : - | : - | : 1,378 |
| | : 2SU | : 711 | | \$ | : - | : 1,540 |
| Subtotal - | all soils | : 3,173 | : 1,363 | : - | : - | : 4,536 |
| Urban . | | : - | : - | : - | : - | : - |
| Water | | : - | : - | : - | : - | : - |
| Total - Zon | e B | : 3,173 | : 1,363 | : - | : - | : 4,536 |
| Zone C | : 1 | : 267 | • | : | 1 | • |
| bene o | : 1SU | : 478 | - | - | : - | : 267 |
| | : 2SU | : 812 | | : - | | : 478 |
| Subtotal - | | 3 5 5 5 | : - | : - | : - | : 812 |
| Urban | CTT SOLTS | 1 - | : - | : - | : - | : 1,557 |
| Water | | | | | . 00 | |
| Total - Zon | e C | 1.557 | | - | : 83 | : 83 |
| 2011 | | . 1,007 | | - | : 83 | : 1,640 |
| GRAND TOTAL P | roject | 85 825 | :15,892 | * 200 | . 7 . 60.7 | .105 000 |
| | - 0,000 | • | . 10,032 | 280 | :3,603 | :105,600 |
| | | • | • | š | : | : |

Basin:
Project:
State:

St. Francis River Fifteen Mile Bayou Arkansas

SUMMARY - TABLE II A ZONE FOR DRAINAGE CALCULATIONS ONLY COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1): (2): (3): (4): (5): (6) Soil :Land use and crop: 2/: Production |
|--|
| Unit : distribution : Acres : Unit: Per Acre: Total |
| |
| All : Open land : 65,467 : : : |
| |
| : Crops : 58,921 : 3/: |
| : Cotton : 22,777 :Lbs.Lint : 321 : 7,316,895 |
| : Cottonseed : (22,777): Ton : 2891 : 6,585,20 |
| : Corn : 317 : Buo : 43 : 13,699 |
| : Rice 2,785 : Cwt. : 30 : 83,550 |
| : Soybeans : .12,544 : Bu. : .20 : 244,933 |
| : Oats (Grain) : 9,907: Bu. : 23 : 229,356 |
| : Oats (Sup.Past.) : (2,315) Los. Beef: 71 : 163,230 |
| : Grain Sorghum : 2,137 : Buc : 19 : 41,152 |
| Perm. Pasture 4,231 : Lbs. Beef: 148: 635,445 |
| : Idle 4,173 : 22 4,173 |
| : Other 1/ 6,546 : |
| :Woodland : 12,535 : Acres : |
| |
| : TOTAL : |
| |

 $\frac{1}{2}$

Farmsteads, farm roads, waste and non-agricultural
Parenthetical amounts are duplicated acreages.
Calculated from Columns 3 and 6; rounded to nearest unit
Total area zone A reduced by 280 acres urban, 3,520 acres water,
1,994 acres dedicated to woodland, and 15,628 acres already
drained or not requiring drainage.

State: Basin: Project: Fifteen Mile Bayou St. Francis River Arkansas

ZONE FOR DRAINAGE CALCULATIONS ONLY SUMMARY - TABLE III A

COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION, PRODUCTION COSTS AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT (Based on projected prices)

| 1 F | | · | | | | | | | | | | | | | A11 | | Unit | Soil | (I) |
|--|--------------|-------------|-----------|----------|--------|-----------------|-------------------|------------------|--------------|-----------|----------------|-------------|-------------|---------|---------------|-------------|------------------|---|-----------------------|
| Farmstands farm roads waste and non-agricultural | | TOTAL | *Woodland | other 1/ | : Idle | : Perm. Pasture | : Grain Sorghum : | : Oats (Grain) : | : Soybeans : | : Rice : | * Cottonseed : | ** | * Cotton * | : Crops | : Open land : | · 60 | * distribution * | : Land use and crop : | s (2) s |
| The etc and | | 21 075 | 2.706 | 1,837 | 1,028 | 226 | 535 | 838 | 1,387 | 4,278 | (8,240) | | 8,240 | 16,532 | 18,369 | | Acres | 2/ | (3) |
| aca-series | | | Acres | •• | •• | *Lbs.Beef | : Bu. | : Bu. | : Bu, | : Cwt. | s Ton | •• | *Lbs.Lint | •• | •• | •• | : Unit | • | : (4) |
| 1+11101 | | • | | •• | •• | : 212 : | : 18 : | 25 : | 24 : | : 30 : | : 3296 : | •• | * 366 · | : 3/ : | 00 | •• | Per Acre: | Production | ; (5) ; |
| • | | | •• | •• | •• | 47,950: | 9,555; | 21,146: | 33,091: | 128,340: | 2,715,76: | • | 3,017,520: | •• | •• | •• | Total : | •• | (6) |
| • | ••• | | 6.87 | •• | •• | •2005 : | 1.53: | •90 : | 2.30 : | 3.75: | 63,00: | •• | .25 : | •• | •• | Dollars : | Per Unit: | Walue of production : Cost of production: Net | (7): |
| | | 1 544 708 | 18.590 | •• | •• | 9,614: | 14,619: | 19,030: | 76,108: | 481,275: | 171,093: | •• | 754,379 : | •• | •• | Dollars : | : Total : | oduction : | (8) |
| •• | •••• | | 3.99 | •• | •• | 30.13: | 17.71: | 17.17 : | 28.75 : | 99.96: | •• | •• | 60 | 4. | •• | Dollars | Per Acres | Cost of pr | (9) |
| • | | 1 321 461 2 | 10.796 | •• | •• | 6,810: | 9,476: | 14,388: | •• | 427,629 : | •• | : 116,081 6 | 812,492 :1. | •• | •• | Dollars : 1 | Total : I | oductions | (10): |
| | : 226,348 6/ | 23 247 5/ | 7.794 | | | 2,804 | 5,143 | 4,642 | 36,238 | 53,646 | | 16,081 6/ | 12,880 5/ | | | : Dollars | Return | Net | (11) |

armsteads, farm roads, waste and non-agricultural

Parenthetical amounts are duplicated acreages.

Calculated from Columns 3 and 10; rounded to nearest cent Calculated from Columns 3 and 6; rounded to nearest unit

Includes calculated negative net return Adjusted to eliminate negative net return

Total area zone A reduced by 280 acres urban, 3,520 acres water, 1,994 acres dedicated to woodland, 9,829 acres woodland not anticipated to be cleared, and 62,726 acres already drained, not requiring drainage or not anticipated to be drained.

State: Project: Arkansas Fifteen Mile Bayou

> ZONE FOR DRAINAGE CALCULATIONS ONLY SUMMARY - TABLE IV A

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION

(Based on projected prices)

| | | | A11 | (1) Soil Unit |
|------------------------------|---|---|-----------------|---|
| Other 1/ | oats (Grain) Oats (Sup.Past.): Grain Sorghum Perm. Pasture | Cotton Cottonseed Rice Soybeans | open land | : (2) : Land use and crop : distribution : |
| 724 2,107 -21,075 5 | | 18,968 11,085 (11,085) 3,269 2,061 | 21,075 | (3) Acres |
| Acres | Bu. Lbs.Beef Bu. Lbs.Beef | Los Lint Ton Cwt Bu | | (4) |
| | 150 24 333 | 5123 25 25 | •0. •0. | Froduction Acres |
| | 40,426 25,070 15,868 69,890 | 6,310,440 5,679,39 114,415 52,081 | | (6) |
| 40 00 00 00, 00 | 2005 2005 2005 | 63,00 3,75 | Dollars | : (7) :Value of :Per Unit |
| 2,564,154 | 36,384 5,227 24,278 | 357,609 357,801 429,056 | Dollars | : (8) production : Total |
| 00, 00 00, 00 00 | 25.28 13.95 21.63 45.17 | ** ** ** ** ** | Dollars | (7) : (8) : (9) : (10) : Talue of production: Cost of production: Per Acre: Total : |
| : :2,152,402: 411,752 | 24,340: 2,427: 14,187: 9,485: | 151 _e 27 :1,676,823: 258,587 111,17 : 363,414: 65,642 29,95 : 61,726: 58,060 | Dollars Dollars | (10) a production Total |
| 411,752 | - 2) | 258,587 65,642 58,060 | Dollars | (11) Net Return |

Farmsteads, farm roads, waste and non agricultural

Parenthetical amounts are duplicated acreages.

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent

Total area zone A reduced by 280 acres urban, 3,520 acres water, 1,994 acres dedicated to woodland, 9,829 acres woodland not anticipated to be cleared, and 62,726 acres already drained, not requiring drainage or not

anticipated to be drained.

Basin: Project: State:

St. Francis River Fifteen Mile Bayou Arkansas

SUMMARY - TABLE II B

ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS

COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1)3 | (2) | : (3) | : (4) : (5) | ; (6) |
|-------|-------------------|--------------|-----------------|-----------|
| Soil: | Land use and crop | : 2/ | : Product | ion |
| Unit: | distribution | : Acres | : Unit : Per Ac | re: Total |
| : | | : | : | • |
| All: | Open land | : 3,173 | : | : |
| * | Crops | : 2,856 | : 3/ | * |
| : | Cotton | : 816 | :Lbs.Lint: 361 | : 294,345 |
| : | Cottonseed | : (816) | : Ton :.3246 | : 264.91 |
| | Soybeans | 1 723 | : Bu. : 21 | : 15,183 |
| 1 | Oats (Grain) | \$ 584 | : Bu. : 29 | : 16,690 |
| | Grain Sorghum | 1 45 | : Bu. : 19 | . 855 |
| * | Perm. Pasture | : 149 | :Lbs.Beef: 187 | : 27,865 |
| : | Idle | : 539 | 1 1 | |
| | Other . 1/ | · · · 317 | ** * * * * * * | : |
| :V | Woodland - | : 1.363 | : Acres : | |
| : | TOTAL | : 4.536 | : : | • |
| : | | | : : | : |
| | | | | |

Farmsteads, farm roads, waste and non-agricultural Parenthetical amounts are duplicated acreages. Calculated from Columns 3 and 6; rounded to nearest unit.

State: Project: Basin: St. Francis River Arkansas Fifteen Mile Bayou

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS (Based on projected prices) SUMMARY - TABLE III B

| | | | | | | A11 | Soil Unit | |
|-----------------------------------|------------|--------------------------------|------------|-----------------|-----------|--|--|---|
| :Woodland : TOTAL | : Idle : | : Oats (Grain) : Grain Sorghum | : Soybeans | : Cottonseed | : Cotton | open land | : Land use and crop : distribution | |
| | 60 66 | •• •• | ** ** | • •• | ** ** | • • • | | |
| 813 4,4365 | 345 363 | 242 242 | 442 | (1,496) | 1,496 | 3 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 | Acres | 777 |
| Acres | | Bu. | Bu. | Ton | *Lbs.Lint | • •• •• | Unit | |
| 00 00 00 00 00 00 | | 26 | 250 H | 3979 | 442 | A | Production Per Acres | Concession of the Contract of |
| ; ; ; | | 10,234 | 10,993 | 595 , 30 | 6,61,450 | | Total | 12/ |
| | 40 00 | | 2.30 | : 63,00 | . 25 | Dollars | :Value of :Per Unit | 777 |
| 5,586 309,426 | •• •• | 9,211 | 25,284 | 37, 504 | : 165,362 | Dollars | Value of production Per Unit: Total | 707 |
| | 00 00 | 22°34: | 29.64: | 108 02 | 115.55: | Dollars | :Cost of p | 701 |
| 3,243 : 2,343 249,983 : 59,443 | 49 00 | 6,299 : 5,140 : | 13,099 : | 10 211 | 172,861: | Dollars | Cost of production: Net: Per Acre: Total : Ret | 7007 |
| 2,343 | | | 12,185 9 | | 30,005 | Dollars | Net Return | |

Parenthetical amounts are duplicated acreages. Farmsteads, farm roads, waste and non-agricultural

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent

Total area zone B reduced by 100 acres woodland not anticipated to be cleared.

State: Project: Basin: St. Francis River Arkansas Fifteen Mile Bayou

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT (Based on projected prices) COMPUTATION OF AGRICULTRUAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS SUMMARY - TABLE IV B

| | | | | | | | | | | | All | | Unit | Soil | 自 |
|------------------|----------|----------|------|---------------|--------------|----------|--------|------------|----------|-------|-----------|------------|--------------------|---|--------|
| | •• | •• | •• | •• | •• | •• | •• | •• | •• | •• | •• | •• | •• | 90 | |
| TOTAL | Woodland | Other 1/ | Idle | Grain Sorghum | Oats (Grain) | Soybeans | Rice | Cottonseed | Cotton | Crops | Open land | | distribution | Land use and crop | (2) |
| *** | * | •• | •• | 89 | •• | •• | •• | •• | •• | •• | •• | •• | •• | •• | |
| 4,436 5/: | 1 | 444 | 172 | 200 | 240 | 548 | 501 | (2,331) | 2,331 | 3,992 | 4,436 | | Acres | 2/ | (3) |
| | | •• | ••` | •• | | •• | •• | •• | ·L. | •• | •• | •• | •• | •• | •• |
| | Acres | | | Bu. | Bu. | Bu. | Cwt. | Ton | Lbs.Lint | | | | Unit ' | | (4) |
| •• •• | •• | •• | •• | •• | •• | •• | •• | •• | | ** | •• | •• | . P | Pr | • |
| | 1 | | | 26 | 41 | 25 | 35 | 4462 | . 496 | 3/ | | | ' :Per Acre: | Production | (5) |
| | •• | •• | •• | •• | •• | •• | •• | •• | ** | •• | •• | •• | e \$ | TCO | - |
| / | | | | 5,129 | 9,945 | 13,894 | 17,535 | 1,040.02 | ,155,585 | | | | Total | | (6) |
| | •• | •• • | •• | •• | '••'' | ** | *** | •• | ••" | 44 | •• | | 1 | . · · | ** |
| | | | | | | | | 0 | | | | 011 | er | alu | |
| | | | | 1.53 | .90 | 2.30: | 3.75 | 63.00 | .25 | , | | Dollars | Per Unit : | ne of I | 7) |
| 46 | | •- | • | •• | • | ca | • | <u>.</u> | 28 | •• | - | DC | | proc | |
| 468,926 | | | | 7,847 | 8,950 | 31,956 | 65,756 | 65,521 | 288,896 | | | Dollars | : Total | luction | (8) |
| •• •• | •• | •• | 40 | •• | •• | •• | •• | •• | •• | •• | •• | | d: | : C | |
| | | | | 22.53 | 25,22 | 29,93 | 111.17 | | 131.57: | 4 | | :Dollars : | er Acre | ost of | (9) |
| | •• | | •• | •• | | •• | •• | •• | | | •• | | •• | pro | ** |
| 389,338 : 79,588 | | | | 4,506 | 6,054 | 16,400 | 55,696 | | 306,682 | | | Dollars | :Per Acre: Total : | : Value of production : Cost of production: | : (10) |
| | •• | ** | •• | | •• | •• | ** | •• | •• | •• | •• | D | | | ** |
| 79,588 | | | | 3,341 | 2,896 | 15,556 | 10,060 | | 47,735 | | | Dollars | Return | Net | (11) |

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Calculated from Columns 3 and 6; rounded to nearest unit Parenthetical amounts are duplicated acreages. Total area zone B reduced by 100 acres woodland not anticipated to be cleared. Calculated from Columns 3 and 10; rounded to nearest cent Farmsteads, farm roads, waste and non-agricultural

Basin: Project: State: St. Francis River Fifteen Mile Bayou Arkansas

SUMMARY - TABLE II C ZONE OF NO PROJECT BENEFIT COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1): Soil: La: | (2) nd use and crop | : (3) | (4) | : (5) : Production | (6) |
|-------------------|--|---|-------------------|---|-------------------------|
| Unit: d | istribution | : Acres | Unit | :Per Acre: | Total |
| : Či | en land rops Corn Soybeans Grain Sorghum Idle Other 1/ dland TOTAL | 1,557 1,402 280 420 282 420 155 | Bu. Bu. Bu. | 2/ : 29 : 24 : 21 : : : : : : : : : : : : : : : : : | 8,118 9,897 5,811 |

^{1/} Farm roads, waste and non-agricultural
2/ Calculated from Columns 3 and 6; rounded to nearest unit
3/ Total area zone C reduced by 83 acres water

Basin: St. Francis River Preject: Fifteen Mile Bayou State: Arkansas

SUMMARY - TABLE III C 5/ ZONE OF NO PROJECT BENEFIT

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION,

(Based on projected prices)

| . TOTAL | All: Open land Crops Corn Soybeans Grain Sorghum | (1): (2) Soil: Land use and crop: Unit: distribution: |
|----------------|--|---|
| 1,5574 | 1,557 1,402 280 420 282 | Acres |
| Acres | Bu. Bu. | (4) Unit |
| | 25 27 2 | Production Per Acres |
| | 9,250 11,157 6,951 | (6) Total |
| •• •• •• •• | 1.45 2.30 | :Value of :Per Unit |
| 49,708 | 13,412 25,661 10,635 | (8) production Total |
| 00 00 00 00 00 | 29.24 30.81 21.91 | (7) : (8) : (9) : (11) : Value of production : Cost of production: Per Unit : Total : Per Acre: Total : |
| 27,308 22,400 | 8,187 12,941 6,180 | (11) production Total |
| 22,400 | 5,225 12,720 4,455 | , , |

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Farm roads, waste and non-agricultural

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent

Total area zone C reduced by 83 acres water

Data same for both "future without" and "future with" project; no table IV C required

State: Project: Basin:

St. Francis River Fifteen Mile Bayou Arkansas

PROJUCT AREA SUMMARY BY SOIL MAPPING UNITS TABLE V

| 1/ Ad | TOTAL: | Subtotal: | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | Subtctal: | 4 * 4 * 4 * 4 * 4 * 4 * 4 * 4 * 4 * 4 * | 2 * 2SU * | 130 : | | Unit : | Soil : | 111 |
|---|-----------------------|-----------|--|--------------------------|---|-----------------------|----------------------|----------------|------------------------|------------------------|-----|
| Adjusted to eliminate negative net return | 27,068 | 5,993 | 1,591 2,104 2,298 | 21,075 | 2,248 | 5,245 | 11,814 | Acres | | (2) | 107 |
| mina | •• •• • | 133 | | 2/:] | •• | oo ; oo | •• •• | - | | 90 OI | · |
| te nemati | 1,903,842 : 1,598,752 | 359,134 | 115,812 113,016 130,306 | 1,544,708 | 244,994 | 54,056 494,514 | 663,549 57,976 | Gross | (Pro | (a) Futu | (2) |
| Ve r | ه هه هه انسوز ۱۰۰ | | • •• • • • • • • • • • • • • • • • • • | 98 98 jud | ** | •• •• | •• ••• | - | duct | re s | |
| et retur | 598,752 | 277,291 | 96,011 85,701 95,579 | 321,461 | 203,924 | 45,464 403,312 | 596,979 47,226 | Cost | (Production in Dollars | Future Without Project | |
| 7 | •• •• • | | • • • • | •• •• | •• •• | •• •• | •• •• | | 00118 | roje | ١ |
| | 308,191 | 81,843 | 19,801 27,315 34,727 | 226,348 ZONES | 41,070 5,063 | 8,592 91,202 | 69,671 10,750 | Net | rs) | oct (5) | 121 |
| | ** ** ** | • •• •• | · • • • • | B •• •• | •• •• | 60 00 | | D | •• | 00 01 | |
| | 3,082,788 | 518,634: | | 2,564,154 : | 386,984 3 | 91,086:: 610,280:: | 1,356,975 : 82,277 : | Gross : | (Production | Future Wi | (8) |
| | 2,569,048 | 416,646: | 151,667 116,220 148,759 | 2,152,402 : to flooding) | 314,283 : 30,673 : | 75,157 : 499,225 : | 1,167,392 | to flooding. | Production in Dollars) | Future With Project | (7) |
| | 513,740 | 101,988 | 24, 295 34, 392 43, 301 | 411,752 | 5,879 | 15,929 | 16,605 | Net | | | (8) |
| | 205,549 | 20,145 | 4,494 7,077 8,574 | 185,404 | 31,631 & 816 O | 7,337 19,853 | 119,912 1/ | Net Production | Difference in | (6) | 70) |

1014 Total area zone A reduced by 280 acres urban, 3,520 acres water, 1,994 acres dedicated to woodland, 9,829 acres woodland not anticipated to be cleared and 62,726 acres already drained, not requiring drainage or in naced to ettiminate negative net i etmi

not anticipated to be drained.

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Total area zones B & C reduced by 83 acres water and 100 acres woodland not anticipated to be cleared.

St. Francis River Fifteen Mile Bayou Arkansas

TABLE VI
LAND CONVERSIONS WITH PROJECT

| (1) | (2) | (3) | (4): | (5) |
|----------------------------------|---------|------------|--------------|---------|
| | ; ; | Cost | Cost: | Total |
| Type of | Total : | of | of: | Cost |
| Conversion 1/ | Amount: | : Clearing | : Smoothing: | |
| | Acres. | Dollars | Dollars: | Dollars |
| Per Acre | | | : | |
| W to GC | xx : | 60 | 12.50: | xx |
| W to IC | xx : | 60 | 12.50: | . xx |
| W to P | xx : | 60 | | xx |
| P to GC | xx : | xx | 12.50: | xx |
| P to IC | , xx | xx | 12.50: | xx · |
| GC to IC | xx : | xx : | xx: | xx |
| GC to P | xx | xx | xx: | XX. |
| | | | : | , |
| | | . * | | . 25 ** |
| Project | 7 | | | |
| W to GC | 3,466 | 207,960 | 43,325: | 251,285 |
| W to IC | 48 | 2,880 | 600: | 3,480 |
| W to P | 5 | 300 | : xx: | 300 |
| P to GC | 16 | xx | 200: | 200 |
| P to IC | 5 | ·xx | 62: | 62 |
| GC to IC | - | xx : | xx : | _ |
| GC to P | - : | xx : | xx: | - |
| | | | : | • |
| | | | : | |
| Total project | xx ; | 211,140 | 44,187 : | 255,327 |
| | | | : | • |
| Annual amortized value 2/ | xx : | xx : | xx: | 13,987 |
| 2/ | | | : | |
| · | | | | |
| Total annual cost of | | | | |
| Total annual cost of conversions | , XX | xx | xx : | 13,987 |

^{1/} W-woodland; GC- general dry-farmed crops; IC- irrigated crops;
 (rice); P- pasture.

^{2/} Amortized over 50 years at 5 percent.

St. Francis River
Fifteen Mile Bayou
Arkansas

TABLE VII ANALYSIS OF FARM DRAI NAGE SYSTEM COSTS

| | | | ₩. | | | | | | Α | Zone | Ē |
|-----------|---------------------------------|-----------------------|-----------------------------------|-----------|--|--|-------------------------------|-----------------------|-----------------------------------|---------------------------------------|-------------|
| TOTAL | 2SU - General crops Subtotal | : 1SU - General crops | : 1 - General crops : 1 - Rice | *Subtotal | : 4 - General crops : 4 - Pasture : 4SU - General crops : 4SU - Pasture | : 2SU - General crops : 2SU - Pasture | 2 - General crops 2 - Rice | : 1SU - General crops | : 1 - General crops : 1 - Rice | * Soil mapping unit * and land use | : (2) |
| 20,493 1/ | 686 : 1,525 1/: | 494 | 225 | 18,968 1/ | 1,962 61 232 7 | 4,579 | 448 79 | 825 | Acres 7,443 3,190 | Area | (3) |
| 301,513 | 10,291 | 8,547 | 3,893 | 277,746 | 26,092 496 3,085 | 68,694 | 6,721 682 | 14,275 | Dollars 128,786 27,536 | llation 2 | moto (4) |
| 29,046 | 991 | 823 | 375 | 26,757 | 2,514 48 297 5 | 6,618 | 647 | 1,375 | Dollars 12,407 2,653 | 3/ | (5) |
| 32,365 | 1,187 | 986 | 449 | 29,703 | 3,011 11 356 | 7,926 | 775 | 1,647 | Dollars 14,860 1,059 | : Maintenancs : Cost | (6) |
| 61,411 | 2,178 4,951 | 1,809 | 824 140 | \$ 56,460 | 0 4 9 5 0 5 5 5 0 5 5 5 0 5 5 5 0 5 5 5 5 5 5 | 14,544 158 | 1,422 92 | 3,022 | Dollers 27,267 3,712 | : Annual : Cost | ; matal (7) |
| 1 | | | | | • | 100- | | | | | |

で下 Includes engineering and contingency Does not include 10 percent "other" land. 3/ Amortized over 15 years at 5 percent

St. Francis River
Fifteen Mile Bayou
Arkansas

TABLE VIII
ANALYSIS OF GROUP DRAINAGE NEEDS AND COSTS

| | : : | | Unit: | Total |
|-------------------------------------|---------------|------------|----------|--------------|
| Item | : Unit : | Amount | Cost : | Cost |
| Reporting 1/ | : | | Dollars: | Dollars |
| Excavation 1/ Spreading spoil 1/ | | | | |
| | :Cubic Yard: | 82,800 | 0.20: | 16,560 |
| Right-of-way easements | . Acres | 19 | 30.00: | 5 7 0 |
| Crossings | : Each | .8 | 300.00 | 2,400 |
| Swinging water gaps | Each : | 10 | 40.00: | 400 |
| Pipe drop structures | Each: | 2 | 200.00 | 400 |
| Flap gates | Each | 4 | 100.00: | 400 |
| Vegetative plantings | : Acres : | 15 | 8.00 | 120 |
| Total construction cost | : xx : | xx | . xx | 20,850 |
| Engineering cost | : | xx | хх | 2,085 |
| Contingencies and legal | : XX : | xx | . XX | 2,085 |
| | | | | |
| Total installation cost | | | | 25,020 |
| Annual equivalent - installati | on cost (amo | rtized for | | |
| 30 years at $3\frac{1}{2}$ percent) | | | | 1,360 |
| Annual maintenance cost, | | | | 1,042 |
| Annual loss of production - ri | ght-of-way | 2/ | | 91 |
| Total annual cost of required | group facilit | ies | : | 2,493 |

^{1/} These items included in excavation costs under normal contract procedures.

^{2/} Annual loss of production - right-of-way. 8 acres @ \$11.39 per acre.

St. Francis River Fifteen Mile Bayou Arkansas

TABLE IX
SUMMARY OF AN NUAL NET PRODUCTION RETURNS
AND ASSOCIATED COSTS

| | | | • • |
|-------|--|--------------------|----------------------|
| | (1) | (2) | : (3) |
| | Item | Total | Discounted Amount |
| ; - | | Dollars | Dollars |
| | | 1 | 3 |
| 2. | Net return with project Net return without project | 513,740 308,191 | t XX |
| 3. | | 205,549 | : xx : 127,691 2/ |
| | | | 1 |
| 4 | Town desires and | | : - 0/ |
| 4. | Farm drainage cost a. Installation cost | 29.046 | : xx 2/ |
| | b. Maintenance cost | 32,365 | * XX |
| | c. Total | 61,411 | 38,150 |
| | | | 1 |
| 5. | Group drainage cost | XX | x = x = 3 |
| | a. Installation cost b. Maintenance cost 1/ | 1,360 1,133 | \$ XX |
| -1.00 | c. Total | 2.493 | 2.070 |
| | | | 1 |
| 6. | Conversion cost | xx · | xx 2/ |
| | a. Installation cost | 13,987 | t xx |
| | b. Maintenance costc. Total | 13 007 | \$ XX |
| | 10001 | 13,987 | 8,689 |
| | | | • |

Includes loss of production, right-of-way

Discounted at 5 percent to account for estimated 20 year
lag to full installation, maintenance, and benefit accrual.

Discounted at 3½ percent to account for estimated 10 year
lag to full installation, maintenance, and benefit accrual.

Basin: Project: Reach: State: St. Francis River

Big Creek

1

Arkansas

TABLE I PRESENT LAND USE

| | :Soil mapes | Open | :Wooded | :Urban | : Vater | : Total |
|---------------------------------------|--------------------------|--|---------------------------|------------------------------|-----------------------|--|
| Zone | ping unit | (Acres) | :(Acres) | : (Acres | (Acres) | : (Acres) |
| Zone A | : 1 : 2 : 2SU : 4SU : 11 | 16,674 11,316 32,632 509 1,227 | 6,193 25 3,647 | : - : - | : - | 22,867 11,341 36,279 509 1,227 |
| | : 11SU : | 3,472 | 1 - | : - | : - | : 3,472 |
| Subtotal - a Urban Water Total - Zone | 1 | 65,830 | 9,865 | : - : 159 : - : 159 | : - : 125 : 125 | : 75,695 : 159 : 125 : 75,979 |
| Zone B Subtotal = a | l 2SU | 2,500 3,811 6,311 | 529 : 1,020 : 1,549 | : - | : - | 3,029 4,831 7,860 |
| Urban Water Total - Zone | * B * | 6,311 | : 1,549 | : - | : 166 : 166 | : 166 : 8,026 |
| GRAND TOTAL - R | Reach 1 | 72,141 | :11,414 | : 159 | : 291 | : 84,005 : |

Basin: St. Francis River
Project: Big Creek
Reach: 1
State: Arkansas

SUMMARY - TABLE II A ZONE FOR DRAINAGE CALCULATIONS ONLY COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| 777 | (2) | (3). | : (4) | : (5): | (6) |
|---------|--------------------|----------|-----------|------------|-----------|
| (+) = | | (0). | • (±) | | (5) |
| | Land use and crop | 2/ | - | Production | |
| Unit: | distribution 🦟 👯 | Acres | : Unit | :Per Acre: | Total |
| | | | • | | |
| A11: | Open land | 59,181 | : | : | |
| 3. | Crops | - 53,265 | : 1 | : 3/: | |
| - 14 | Cotton | 21,127 | :Lbs.Lint | : 332 : | 7,022,715 |
| : | Cottonseed | (21,127) | : Ton | : 2992 : | 6,320.45 |
| | Rice | | : Cwt, | : 30 : | 24,780 |
| : | Soybeans | | | : 22 : | 305,685 |
| : | Oats (Grain) | | : Bun | : 24 : | 220,768 |
| /\$ | Oats (Sup. Past.): | | | : 70 : | 242,340 |
| | Grain Sorghum - | 1.801 | : Bu. | : 21 : | 38,532 |
| | Perm. Pasture | | Lbs Beef | : 145 : | 628,140 |
| \$. | Idle - | 2,370 | • 7 | | |
| : | Other 1/2 : 1: | 5,918- | • | : | 1 |
| . '21 | Woodland - | 9,865 | : Acres | : : | |
| : | TOTAL : | 69,046 | /: | : | * |
| | | . ±/ | • | : : | • |

^{1/} Farmsteads, farm roads, waste and non-agricultural

^{2/} Parenthetical amounts are duplicated acreages.
3/ Calculated from Columns 3 and 6; rounded to nearest unit
4/ Total area zone A reduced by 159 acres urban, 125 acres water,
6,659 acres already drained or not requiring drainage.

Basin:
Project:
Reach:
State:

Big Creek
Arkansas

SUMMARY - TABLE III A

COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION, PRODUCTION ZONE FOR DRAINAGE CALCULATIONS ONLY

COSTS AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT (Based on projected prices)

| 10/r | | | | | | | | | | | | | | | | A11 | | Unit | Soil | 日 | |
|---|--|-------------|--------------|----------|-------------------|-------------------|---------------------|------------------|--------------|------------|-------------|----------------|------------|---------------------|-----------|---------------|------------|------------------|--|---------|--|
| Farmsteads, farm roads, waste and non-agricultural Parenthetical amounts are duplicated acreages. | : TOTAL : | *Woodland * | : Other 1/ : | : Idle : | : Perm. Pasture : | : Grain Sorghum : | : Oats (Sup.Past.): | : Oats (Grain) : | : Soybeans : | : Rice : | : Corn ; | : Cottonseed : | | : Cotton : | : Crops : | : Open land : | •• | a distribution a | : Land use and crop : | : (2) : | |
| are dupli | 17,158 7/ | 3,011 | 1,414 | 453 | 570 | 636 | (249) | 696 | 1,789 | 1,700 | 199 | (6,685) | | 6,685 | 12,728 | 14,142 | | Acres | 2/ | (3) | |
| nd non-agri | \.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\. | * Acres | •• | 40 | :Lbs.Beef | : Bu. | :Lbs.Beef | : Bu. | * Bu. | * Cwt. | Bu. | : Ton | •• | *Lbs.Lint | •• | •• | •• | : Unit | •• | : (4) | |
| icultural | •• •• | •• | •• | •• | : 182 | ಬ್ | : 105 | 25 | 24 | 3 0 | . 45 | :, 3467 | •• | 385 | . 3/ | •• | •• | Per Acres | Production | : (5) | |
| | | •• | •• . | •• | : 103,480 | : 15,806 | : 26,145 | : 17,476 | 42,749 | : 51,000 | 8,955 | : 2,317,51 | •• | 2,575,020 | •• | •• | •• | Total | Þ | (6) | |
| | •• •• | : 6.40 | •• | •• | : 2005 | : 1.53 | : 2005 | • 90 | 2. 30 | : 3.75 | : 1.45 | : 63.00 | •• | . 25 | •• | •• | :Dollars | :Per Unit : | :Value of | : (7) | |
| | 1,177,485 | : 19,270 | | •• | : 20,747 | : 24,183 | : 5,242 | : 15,728 | • 98,322 | : 191,249 | : 12,985 | : 146,004 | •• | : 643,755 | | | : Dollars | * Total | :Value of production : Cost of production: Net | : (8) | |
| | | : 3.09: | •• | •• | : 25.66: | : 22.04: | : 9.13: | : 17.11 : | : 28,75 : | : 99,96: | : 37.71: | •• | •• . | : 102-14 : | . 4/: | | * Dollars: | :Per Acre: | :Cost of p | : (9) | |
| | 963,794 | 9,304: | • | •• | 14,628 : | 14,019: | 2,273: | 11,906: | 51,434 : | 169,932: | 7,504: | | •• | 682,794 : | • | | Dollars: | Total : Return | roduction: | (10): | |
| | 963,794 : 213,691 5/ : 214,766 6/ | 9,966 | | | 6,119 | 10,164 | 2,969 | 3,822: | 46,888 | 21,317.0 | 5,481 . | | 108,040 6/ | 682,794 :106,965 5/ | | | Dollars | Return: | Net | (11) | |

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent

Includes calculated negative net return Adjusted to eliminate negative net return

Total area zone A reduced by 159 acres urban, 125 acres water, 6,854 acres woodland not anticipated to be cleared and 51,688 acres already drained, not requiring drainage or not anticipated to be drained.

Basin: St. Francis River Project: Big Creek Reach: 1
State: Arkansas

SUMMARY - TABLE IV A FOR DRAINAGE CALCULATIONS ONLY

PRODUCTION COSTS, AND NET RETURNS: COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE (Based on projected prices) FUTURE CONDITIONS WITH PROJECT

| 1/ Farmsteads, farm roads, | | * TOTAL * | : Woodland : | : Other 1/ | · dle | : Perm. Pasture : | : Grain Sorghum : | : Oats (Sup.Past.) : | : Oats (Grain) : | : Soybeans : | : Rice | : Corn | * Cottonseed * | : Cotton : | : Crops | All : Open land : | •• | Unit : distribution : | Soil : Land use and crop : | (1) : (2) : |
|----------------------------|----|--------------------|--------------|------------|-------|-------------------|-------------------|----------------------|------------------|--------------|------------|-----------|----------------|--------------|---------|-------------------|-------------------|-----------------------|---|-------------|
| s, waste a | | 17,153 5/: | 1 | 1,716 | 568 | 695 | 267 | (554) | 917 | 2,195 | 1,848 | 229 | (8,718) | 8,718 | 15,437 | 17,153 | | Acres | 2 | (3) |
| waste and non-agricultural | | ** | * Acres | ••, | ••, | :Lbs.Beef | : Bu. | :Lbs.Beef | : Buo | : Bu. | : Cwt. | * Bu. | : Ton | :Lbs.Lint | •• | •• | •• | : Unit | •• | : (4) |
| oultural | •• | •• | •• | •• | •• | : 300 . : | 24 . | : 109 : | . 42 | : 26 : | : 35 : | : 53 : | : .4864 : | 540 | : 3/: | •• | •• | :Per Acre: | Production | : (5) : |
| | | | | | | 208,465 | 6,408 | 60,305 | 38,061 | 57,205 | 64,680 | 12,137 | 4,240,05 | 4,711,165 | | | | Total | | (6) |
| | ** | •• | | •• | •• | 2005 | · 1.53 | : ,2005 | : .90 | : 2.30 | : 3.75 | : 1.45 | : 63,00 | . 25 | •• | •• | :Dollars | :Per Unit | :Value of | : (7) |
| | | 1,934,581 | •• | •• | •• | : 41,798; | 9,804 | : 12,091; | : 34,254; | : 131,571; | : 242,550: | : 17,599: | : 267,123; | : 1,177,791; | •• | •• | : Dollars | : Total | : Value of production : Cost of production: Net | : (8) |
| | •• | | •• | | •• | 41.15: | 21.51: | | 25.26 : | | 111.17: | 44.74 : | •• | 142.26 :1 | 4/ | • | :Dollars :Dollars | : Fer Acre: | Cost of pr | (9) |
| | •• | 1,585,722: 348,859 | •• | •• | •• | 28,597: | 5,743: | 5,288: | 23,161: | 66,986: | 205,443: | 10,245: | •• | :1,240,259; | •• | •• | ollars : | Total : | oduction: | (10) |
| | | 348,859: | | | * 4 | 13,201. | 4,061 | 6,803 | 11,0937 | 64,5856 | 37,107 | 7,354 | | 204,655 | | | Dollars | Return | Net :: | (11) |

Parenthetical amounts are duplicated acreages.

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent

Total area zone A reduced by 159 acres urban, 125 acres water, 6,854 acres woodland not anticipated to be cleared, and 51,688 acres already drained, not requiring drainage or not anticipated to be drained.

|जारु|ध्राय

Basin: St. Francis River
Project: Big Creek
Reach: 1
State: Arkansas

SUMMARY - TABLE II B

ZONE FOR DRAINAGE AND FLOOD CONDTOL CALCULATIONS COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1): | (2) | (3) | : (4) | : (5) | 1 | (6) |
|-------|---------------------|---------|-----------|-------------|---|---------|
| Soil: | Land use and crop : | 2/ | 2 | Production | n | |
| Unit: | distribution | Acres | | Per Acre | _ | Total |
| | | 1101 00 | . 01110 | 1101 1101 0 | - | 100.71 |
| · | | | : | : | • | |
| All: | Open land | 6,311 | * | : | : | |
| : | Crops . : | 5,680 | | : 3/ | : | |
| : | Cotton | 2,159 | :Lbs.Lint | 325 | : | 702,370 |
| | Cottonseed | (2,159) | : Ton | . 2928 | : | 632.13 |
| : | Corn | 112 | : Bu. | : 14 | : | 1.568 |
| | Soybeans | 17110 | : Bu. | : 19 | : | 21,450 |
| | Oats (Grain) | 772 | : Bu. | 24 | : | 18,368 |
| : | Oats (Sup.Past.): | (344) | :Lbs.Beef | | 1 | 25,800 |
| | Grain Sorghum | 171 | : Bu. | 23 | 1 | 3,933 |
| | Perm. Pasture | 856 | :Lbs.Beef | | : | 132,680 |
| | Idle | 500 | • | : | • | |
| | Other 1/ | 631 | : | | • | |
| | Noodland - | 1,549 | : Acres | : | 1 | |
| | TOTAL | 7,8604 | | • | | |
| 1 : • | | ,,00,04 | | | | |
| | | | | | - | |

Farmsteads, farm roads, waste and non-agricultural
Parenthetical amounts are duplicated acreages.

Calculated from Columns 3 and 6; rounded to nearest unit
Total area zone B reduced by 166 acres water

Basin:
Project:
Big Creek
Reach:
Arkansas

COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION PROJECT FUTURE CONDITIONS WITHOUT PROJECT ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS SUMMARY - TABLE III B

(Based on projected prices)

| 1/ Farmsteads, farm roads, waste and non-agricultural | •• | * TOTAL | :Woodland : : | : Other 1/ : | Idle | : Grain Sorghum : | : Oats (Grain) : | : Soybeans | : Rice | : Cottonseed : | : · Cotton | : Crops | All: Open land | | Unit: distribution : | Soil: Land use and crop : | (1): (2) | |
|---|----|-------------------|---------------|--------------|------|-------------------|------------------|------------|---------------|----------------|--------------------|---------|----------------|-------------------|----------------------|---|----------|---|
| oads, wast | | 7,675 5/ | 1,054 | . 662 | 225 | 370 | 525 | 1,508 | 821 | (2,510) | 2,510 | 5,959 | 6,621 | | Acres | 2/ | (3) | : |
| e and non | •• | `.' | . Acres | •• | •• | · Bu. | Bu. | .: Bu. | : Cwt. | * Ton | *Lbs.Lint | •• | •• | •• | tinu : | •• | : (4) | |
| -agricultu | •• | •• | •• | •• | •• | 25 | . 39 | 26 | * 34 | : 4194 | 466 | 3/ | •• | •• | :Per Acre: | Production | : (5) | |
| .a1 | | •• | •• | •• | | 9,232 | 20,738 | 39,760 | 27,914 | 1,052,68 | 1,169,650 | · | | | Total | | (6) | |
| | •• | •• | : 6,40 | •• | •• | •• | •• | 2.30 | •• | •• | · e 25 | ** | •• | Dollars | :Per Unit | *Value of | : (7) | - |
| | •• | 594,391 | : 6,746 | •• | •• | : 14,125 | : 18,664 | : 91,448 | : 104,677 | : 66,319 | : 292,412 | •• | •• | :Dollars | : Total | production | : (8) | |
| | •• | •• | : 3.09 | •• | •• | : 22.10 | : 24.16 | : 30.79 | : 108,92 | •• | : 121.87 | : 4/ | •• | Dollars : Dollars | Per Acre | Value of production : Cost of production: | : (9) | |
| | 69 | 465,874 : 128,517 | 3, 256 | •• | •• | : 8,177 | : 12,683 | : 46,431 : | 89,423 | •• | 121.87 : 305,904 : | •• | •• | Dollars | :Per Acre: Total : | production | (00) | |
| | | 128,517 | 3,490 | | | 5,948 | 5,981 | 45,017 | 15,254 | | 52,827 | | | Dollars | | Net | (11) | |

-108-

Total area zone B reduced by 166 acres water and 185 acres woodland not anticipated to be cleared.

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent

Parenthetical amounts are duplicated acreages,

Basin: St. Francis River
Project: Big Creek
Reach: 1
State: Arkansas

PRODUCTION COSTS, AND NET RETURNS: COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS SUMMARY - TABLE IV B FUTURE CONDITIONS WITH PROJECT

| TOTAL | · | • Other 1/ | : Idle | : Grain Sorghum | : Oats (Grain) | : Soybeans | : Rice | : Cottonseed : | : Cotton | : Crops | All: Open land | •• | | Soil: Land use and crop : | (1) s (2) s |
|-------------------|-------|------------|--------|-----------------|----------------|------------|------------|----------------|-----------|---------|----------------|------------------|-----------|--|-------------|
| 7,6755/ | | 768 | 207 | 320 | 557 | 904 | 667 | (4,252) | 4,252 | 6,907 | 7,675 | | Acres | 2/ | (3) |
| | Acres | •• | •• | Bu. | * Bu. | · Bu. | : Cwt. | * Ton | *Lbs.Lint | •• | •• | •• | : Unit | •• | : (4) |
| •• •• | •• | •• | •• | 27 : | · 43 · | 25 | 35 : | : .4557 : | 506: | 3/ : | •• | •• | Per Acres | Production | : (5) : |
| 7 | | | | 8,528 | 23,710 | 22,432 | 23,345 | 1,937.50 | 2,152,780 | | | | Total | | (6) |
| | •• | •• | •• | 1.53: | . 90 : | 2.30: | 3,75: | : 63,00: | . 25: | •• | •• | Dollars : | Per Unit | :Value of production : Cost of production: | (7) |
| 833,783 | | | | 13,048 : | 21,339 | 51,594 | 87,544 | 122,063 | 538,195 | | | Dollars | Total | roduction : | (8) |
| •• | | 40 | •• | 23,15 : | 25,91: | 29,66 : | : 111,17 : | •• | • | 4. | | Dollars: Dollars | Per Acre: | Cost of pr | (9) |
| 694,891 : 138,892 | • | •• | •• | 7,409: | 14,432 : | 26,809 : | 74,150 : | •• | 572,091: | •• | •• | Bollars : | Total : | oduction: | : (01) : |
| 138,892 | | | | 5,639 | 6,907 9 | 24,785 | 13,394 | | 88,167 | | | Dollars | Return | Net | (11) |

Farmsteads, farm roads, waste and non-agricultural Parenthetical amounts are duplicated acreages.

Calculated from Columns 3 and 10; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent

10/10/01-

Total area zone B reduced by 166 acres water and 185 acres woodland not anticipated to be clearedo

Stato: Reach: Project: Basin: St. Francis River Big Creek Arkansas

> REACH SUMMARY BY SOIL MAPPING UNITS TABLE V

| | TOTAL : | Subtotal: | 280 : | Subtotal: | 2 23U . | , | Unit : : | \$5:1 * | (I) |
|---|-----------|-----------|--------------------------------------|--------------|----------------------|--|------------------|-------------------------|-----------------------------------|
| | 24,828 | 7,675 | 2,966 4,709 | 17,153 | 8,500 | 5,937 | Acres | | (2) |
| | ro 00 (| 13/ | | 2/:1 | | •• | •• | | |
| | 1,771,876 | 594,391 | 228,041 | 2/:1,177,485 | 242,946 | 259,732 | Gross | (Pro | (3) Futu |
| | : 1,4 | oo oo | ** ** | | en 12 | | | ducti | re Wi |
| | 1,429,668 | 465,874 | 187,125 278,749 | 963,794 | 202, 188 536, 266 | 225,340 | Cost | (Production in Dollars | : (4) : Future Without Project |
| | 343,283 | :128,517 | 40,916 87,601 | : 214, 766 | 40,758 :138,541 | 20NE 35,467 1 | • Net | ollars) | • (5) • ojec t |
| | on 00 (| • •• •• | •• •• t | ਲ •• • | 90 100 | | •• | •• | •• •• |
| | 2,768,364 | 833,783 | 317,413 : 270,51 516,370 : 424,37 | 1,934,581 | 406,063 955,287 | (not subject to flooding 573,231 : 477,152 | Gross | (Production in Dollars, | (6) : (7) : |
| | 2,28 | . 69 | 42 | 55 | 77 | t to f | Cc | tion i | e with |
| ı | 2,280,613 | 694,891 | 270,513 424,378 | 1,585,722 | 334,903 773,667 | o flooding | Cost | n Dolla | (7) Projec |
| | : 487,751 | · 138,892 | 46,900 91,992 | 348,859 | 181,620 | 96,079 | * Net | rs) | ਜੋ (8) |
| | 144,468 | 10,375 | 5,984 4,391 | : 134,093 | | : 60,612 | : Net Production | : Fifference in | ; (9) |
| - | | | -11 | .0- | | 1 | action | e in | |

Adjusted to eliminate negative net return

Total area zone A reduced by 159 acres urban, 125 acres water, 6,854 acres woodland not anticipated to be cleared, and 51,688 acres already drained, not requiring drainage or not anticipated to be drained. Total area zone B reduced by 166 acres water and 185 acres woodland not anticipated to be cleared.

Basin: St. Francis River
Project: Big Creek
Reach: 1
State: Arkansas

TABLE VI
LAND CONVERSIONS WITH PROJECT.

| (1) : | (2) | (3) | (4) | (5) |
|----------------------------|--------------|------------|-------------|-----------|
| 1 | | Cost | Cost | |
| Type of \$ | Total : | of t | of | Total |
| Conversion 1/ : | Amount | Clearing a | Smoothing a | Cost |
| | Acres | Dollars | Dollars | Dollars |
| Per Acre : | | | | |
| W to GC | XX S | 60 | 15 | XX |
| W to IC | XX 8 | 60 : | 15 | XX |
| W to P | XX s | 60 | XX : | xx x |
| P to GC : | xx : | xx : | - : | XX |
| Pito IC | xx : | xx : | - | XX |
| GC to IC. | , x x | XX X | xx: | xx |
| GC to P | xx : | xx | xx. | XX |
| | | | | |
| * | | | | |
| Project | | | | |
| W to GC | 3,792 | | | |
| W to IC | 148 | 11 | | |
| W to P | 125 | 7,500 | XX 's | 7,500 |
| P to GC | - : | XX : | - ; | - |
| P to IC | - : | XX S | - | - |
| GC to IC : | - | XX : | xx | - |
| GC to P | - : | . xx | XX | - |
| | | 1 | | : |
| m | | | | |
| Total project : | XX : | 243,900 | 59,100 | 303,000 |
| | | | | : |
| Annual amortized value 2/3 | XX : | xx : | xx | 16,598 |
| - 1 | | 3 | | |
| Total annual cost of : | | | | |
| conversions : | XX : | xx : | XX : | 16,598 |
| 3 | | \$ | | 3 |

^{1/} W-woodland; GC- general dry-farmed crops; IC-irrigated crops; (rice): P- pasture.

⁽rice); P- pasture.

2/ Amortized over 50 years at 5 percent

| 221 | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | | | | | А | Zone | | Basin: Project: Reach: State: |
|--|---------------------------------------|-----------------------|---------------------|------------|--|--|--|---------------------------------------|----------------|---|
| Does not include 10 percent "other" Includes engineering and contingency | . Subtotal | : 2SU - General crops | : I - General crops | * Subtotal | : 2SU - General crops : 2SU - Pasture | : 2 - General crops : 2 - Rice : 2 - Pasture | : 1 - General crops : 1 - Rice : 1 - Pasture | :Soil mapping unit : and land use | : (2) : | St. Francis River t. Big Creek Arkansas |
| 17,242 1/ ent other land. | 1,805 1/: | 1,116 | 689 | 15,437 1/ | • 7,344 • 306 • | 2,077 | Acres. 5,473 1,603 267 | * | : (3) : | IANA |
| 252,515 : | 28,665 | 16,743 | 11,922 | 223,850 | 110,175 | 31,160 2,115 1,136 | 13,837 2,485 | Total Cost Installation 2 | (4) | TABLE ANALYSIS OF FARM DRA |
| 24,326 over 15 years | 2,762 | 1,613 | 1,149 | 21,564 | 10,614 | 3,002 204 109 | 1,333 239 | *Annual *Equivalent 3/ *Instl.Cost 3/ | (5) | TABLE VII; FARM DRAINAGE SYSTEM COSTS |
| 27,311 at 5 percent | 3,308 | 1,932 | 1,376 | 24,003 | 12,712 | 3,595 81 26 | 6,934 532 57 | 0 | : (6) | STS |
| 51,637 | 6,070 | 3,545 | 2,525 | 45,567 | 23,326 | 6,597 285 | 12,723 12,865 1,865 | Total Annual Cost | : (7) | |
| | | | | | | -112- | | | | |

Basin:
Project:
Reach:

St. Francis River
Big Creek
1

State: Arkansas

TABLE VIII ANALYSIS OF GROUP DRAINAGE NEEDS AND COSTS

| Item | Unit : | Amount | : Unit : Cost : | Total Cost | | | | | | | |
|---|----------------|--------|-----------------|---------------|--|--|--|--|--|--|--|
| Excavation 1/ Spreading spoil 1/ | : : | ٠ | : : | Dollars | | | | | | | |
| Clearing right-of-way 1/ | :Cubic Yard: | 42,600 | 0.20 | 8,520 | | | | | | | |
| Right-of-way easements | : Acres : | 4 | : 30.00 : | 120 | | | | | | | |
| Crossings | Each : | 6 | 300.00 | 1,800 | | | | | | | |
| Swinging water gaps | Each : | 8 | : 40.00 | 320 | | | | | | | |
| Pipe drop structures | Each: | 1 | 200.00 | 200 | | | | | | | |
| Flap gates | : Each : | 3 | : 100.00 | 300 | | | | | | | |
| Vegetative plantings | Acres | 4 | 8.00 | 32 | | | | | | | |
| Total construction cost | ; xx ; | xx | : XX | 11,292 | | | | | | | |
| Engineering cost | ; xx ; | xx | : 🛪 | 1,129 | | | | | | | |
| Contingencies and legal | : xx : | ж | xx : | 1,129 | | | | | | | |
| Total installation cost | | | | 13,550 | | | | | | | |
| Annual equivalent - installation (amortized for 30 years as | | | | 737 | | | | | | | |
| Annual maintenance cost : 565 | | | | | | | | | | | |
| Annual loss of production - rig | ght-of-way | 2/ | | 14 | | | | | | | |
| Total annual cost of required | group faciliti | ies | | 1,316 | | | | | | | |

^{1/} These items included in excavation costs under normal contract procedures.

^{2/} Annual loss of production - right-of-way. 1 acre @ \$13.83.
per acre.

Basin: St. Francis River
Project: Big Creek
Reach: 1
State: Arkansas

TABLE IX
SUMMARY OF ANNUAL NET PRODUCTION RETURNS
AND ASSOCIATED COSTS

| - | : (1) | (2) | : (3) |
|-----|---|--|-------------------------------|
| | 1 | and the second s | Discounted . |
| | Item | Total | *Amount |
| - | | Dollars | : Dollars |
| | | 1. (| |
| 1. | Net return with project | 487,751 | xx 2/ |
| 2. | Net return without project | 343,283 | * XX |
| 3. | Gross benefit to project | 144,468 | : 114,521 2/ |
| - | | | 114 |
| | | | : |
| 4. | Farm drainage cost | xx x | * XX 2/ |
| | a. Installation cost: | 24,326 | \$ XX |
| | b. Maintenance cost | 27,311 | * XX |
| | c. Total | 51,637 | : 40,933 |
| _ | | | * \$ _ / |
| 5. | Group drainage cost | K Call XX | * xx 3/ |
| | a. Installation cost | 737 | \$ XX |
| 6.5 | b. Mai ntenance cost 1/ | 579 | \$ XX |
| | c. Total | 1,316 | : 1,093 |
| | Commence of the second | The second of the second of the second of | Brand or a market was to be a |
| 6. | Conversion cost | r XX | xx 	 2/ |
| | a. Installation cost | 16,598 | \$ XX |
| | b. Maintenance cost | 10.500 | XX |
| | c. Total | 16,598 | : 13,157 |
| | | | • |

^{1/} Includes loss of production, right-of-way

Discounted at 5 percent to account for estimated 10 year lag to full installation, maintenance, and benefit accrual.

Discounted at 3½ percent to account for estimated 10 year lag to full installation, maintenance, and benefit accrual.

Basin: St. Francis River
Project: Big Treek
Reach: 2
State: Arkansas

TABLE I
PRESENT LAND USE

| - | | | | | | 7/1 |
|-------------|------------|------------|----------|-----------|--------|--------------|
| | :Soil map- | | :Wooded | | Water | : Total |
| Zone | ping unit | (Acres) | *(Acres) | : (Acres) | (Acres | (Acres) |
| | 3 | | 1 | : | 3 | ; |
| Zone A | : 1 | 2, 529 | 1:002 | 1 | | : 3,531 |
| | : 2 | 3,113 | : 159 | 1 - | | : 3,272 |
| | s 2SU | 14,605 | : 1.135 | | | :15,740 |
| | 4 | 985 | . 1,100 | | | : 985 |
| | 11011 | | 07 | | , , , | - |
| d.3.4.4.3 | : 11SU | 8,989 | . 83 | : | | \$ 9,072 |
| | -all coils | 30,221 | : 2,379 | 1 | | :32,600 |
| Urban. | | . - | | : 67 | | : 67 |
| Water | | | | 8 | | 1 - |
| Total-Zon | Θ A : | 30,221 | : 2,379 | 8 67 | | :32,667 |
| | : | | 2 | 2 | | : |
| Zone B | : 1 | 1.089 | : 3,933 | 1 - | | : 5,022 |
| ., | 2SU : | 853 | 566 | | | : 1,419 |
| | : 11SU : | 87 | | | | 87 |
| Subtotal- | | | 4 400 | - | | |
| | att softs | 2,029 | : 4,499 | - | • | : 6,528 |
| Urban | 5 1 2 | - | 1: - | | | |
| Water | * | | 1: - | 1 - | 960 | s 960 |
| Total-Zon | e B | 2,029 | 1 4,499 | 1 | 960. | : 7,488 |
| 7 7 7 | 3 | | | 18 | : | : |
| GRAND TOTAL | -Reach 2 | 32,250 | 1.6,878 | 8 67 | 960 | :40,155 |
| | . : | 10.01 | 1 | • | | |
| - | | | | • | , | |

Basin: St. Francis River
Project: Big Creek
Reach: 2
State: Arkansas

SUMMARY - TABLE II A ZONE FOR DRAINAGE CALCULATIONS ONLY COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1) | (2) s | (2) | (4): | (5) | (6) |
|-------|----------------------|----------|---------------------------------------|-----------|---------------|
| Soil | Land use and crop | (3) | · (4) · 1 | (5) | • |
| Unit | distribution : | | | Per Acres | |
| OHITC | t distribution : | Acres | OUITO SI | er Acre | 100a1 |
| All | • Onen Jand | 10 640 | | | |
| wit | s Open land | 19,642 | | -/ | |
| · | : Crops . | 17,679 | | 3/ 3 | • |
| | : Cotton : | 7,147 | : Lbs.Lint: | 352 | 2,518,020 |
| | * Cottonseed | (7,147) | Ton : | 3171 | 2,266,22 |
| | & Corn | 12 | Bu. s | 43 | 516 |
| | : Rice | 137 | Cwt. | 30 | 4,110 |
| , | : Soybeans : | 4,683 | Bu. | 24 | 110,678 |
| | i Oats (Grain) | 2,822 | Bu. | 27 | 75.388 |
| : | : Oats (Sup.Past.) : | (1,111): | Lbs.Beef: | 70 | 77,770 |
| 9 | : Grain Sorghum : | 575 | Bu. 8 | 22 | 12,749 |
| | : Perm. Pasture : | 1,545 | Lbs.Beef: | 145 | 224.585 |
| | : Idle | 758 | | | |
| | : Other 1/ | 1,963 | S S S S S S S S S S S S S S S S S S S | .: | |
| | :Woodland | 2,296 | Acres : | | |
| | * TOTAL | 21,938,/ | | * | |
| | : | 4/ | | | *** · · · · · |

Farmsteads, farm roads, waste and non-agricultural
Parenthetical amounts are duplicated acreages
Calculated from Columns 3 and 6; rounded to nearest unit
Total area zone A reduced by 67 acres urban and 10,662 acres already drained or not requiring drainage.

State: Reach: Project: Basin: St. Francis River Big Creek Arkansas

SUMMARY - TABLE III A

ZONE FOR DRAINAGE CALCULATIONS ONLY

COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION, PRODUCTION COSTS AND NET RETURNS: FUTURE CONDITIONS TITHOUT PROJECT

(Based on projected prices)

| 1/ Farmsteads, farm roads, | 20 20 | * TOTAL | | • Other 1/ | • · · dle | : Perm. Pasture | : Grain Sorghum | : Oats (Sup.Past. | a Oats (Grain). | * Soybeans | * Rice | : Corn | : Cottonseed | | Cotton | * Crops | All : Open land | •• | Unit : distribution | Soil : Land use and crop | (1) : (2) | |
|----------------------------|-------------|---------|---------------|------------------------|----------------|-----------------|-----------------|-------------------|-----------------|-------------------|----------------|---------------|---------------------------------------|------------|--------------------|--------------------|-----------------|-------------------|---------------------|--|------------------|--|
| | | 5,207, | 655 | . 456. . | . 135 . | 173 | . 198 |): (109): | •• | •• | • | | : (2,425) : : | •• | * . 2,425 L1 | . 4,096 .:: | 4,552 | 00 | •• | rop : 2/: : | : (3) :: | |
| waste and non-agricultural | •• •• | •• | Acres : | •• | •• | 9ef * | •• | Lbs.Beef: 105 : | •• | Bu. : 26 : | .Cwt. : 30 : | •• | Ton :.3595 : | •• | Lbs.Lint: 399 | : 3/: | •• | | Unit :Per Acre: | Production | (4) : (5) : | |
| | •• •• | • | •• | •• | •• | •• | •• | 11,445 : . | •• | •• | •• | •• | 871.78 : 6 | | 968,655 | •• | •• | : Dollars | Total Per | | (6) | |
| | •• •• « | 397,592 | . 4,192 | •• | ** | 2005 : 6,571 | 1,53 : 7,994 | 2005 : 2,295 | oo ' | •• | 3,75 : 34,762 | 1.45 : 5,350 | 63.00 : 54,922 | •• | .25 : 242,164 | •• | •• | lars : Dollars | Per Unit : Total | :Value of production : Cost of production: | (7) : (8) | |
| | •• •• •• | •• | •• | •• | •• | 1 : 26,89 : | 4 : 22,99 : | 5 : 9,13 : | : 18 | 20.28 | 8 99.96 s | 0.4 37.71 . | · · · · · · · · · · · · · · · · · · · | ** | : 105-10. | . 4/, 8: | •• | Dollars . Do | Per Acres | n :Cost of prod | : (9) : | |
| | 75,5506/ | 21 | 2,024 : 2,168 | • | • | 4,652 : 1,919 | 4,553 : 3,441 | 995 : 1,300 | 3,772 : 1,438 | 17,381 * 16,751 = | 30,887 : 3,875 | 3,092 : 2,258 | | : 42,4002/ | 254,863 : 42,2235/ | •• | •• | Dollars : Dollars | Total : Return | duction: Net | (11) : (11) | |

Parenthetical amounts are duplicated acreages.

Calculated from Columns 3 and 6; rounded to nearest unit

Calculated from Columns 3 and 10; rounded to nearest cent Includes calculated negative net return

Adjusted to eliminate negative net return

Total area zone A reduced by 67 acres urban, 1,641 acres woodland not anticipated to be cleared, and 25,752 acres already drained, not requiring drainage or not anticipated to be drained.

Reach: State: Project: Basin: St. Francis River Arkansas Creek

ZONE FOR DRAINAGE CALCULATIONS ONLY SUMMARY - TABLE IV A

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION

(Based on projected prices)

| 1 | | | : | | | | | | | | | | | | All | | Unit | Soil | (1) | |
|----------------------------|------------------|-------------|--------------------------|----------|-----------------|-------------------|----------------------|------------------|--------------|------------|------------|----------------|-------------------|---------|-----------------|-------------------|------------------------|---|-------------------------|--|
| Farmsteads, farm roads, | TOTAL | *Woodland * | · Other 1/ | : a Idle | Perm. Pasture : | : Grain Sorghum : | : Oats (Sup. Past.): | : Oats (Grain) : | s Soybeans s | * · Rice : | * : Corn * | * Cottonseed * | t Cotton : . : | * Crops | : Open land : : | •• | * distribution * | * Land use and crop * | 1 (2) · 1 | |
| | 5, 207 5/ | | 521 | 158 | 199 | 44 | (165) | 244 | 661 | 332 | 91 | (2,957) | 2,957 | 4,686 | 5,207 | | Acres | 2/ | (3) | |
| waste and non-agricultural | | a Acres | | • | *Lbs. Beef | . Bu. | *Lbs.Beef | Bu. | Bu. | . Cwt. | Bu. | * Ton | *Lbs.Lint | 4 | 4 | •• | * Unit | • | : (4) | |
| cultural | •• | • | •• | •• | : 303 | 24 | 125 | . 43 | 27 | 35 | 53 | 1.4803 | \$ 534 | 3/ | | | Per Acres | Production | : (5) | |
| | , | | | | 60,325 | 1,056 | 20,625 | 10,472 | 17,796 | 11,620 | 4,823 | 1,420,29 | 1,578,095 | * . | a · | | Total | | (6) | |
| 2 | •• •• | • | •• | 3. | : 2005 | 1.53 | 2005 | . 90 | 2.30 | 3.75 | 1.45 | \$ 63.00 | . 25 | | | :Dollars | Per Unit : | *Value of | : (7) | |
| when it is not the in- | : 602,770 | | | | : 12,094 | : 1,616 | 1 4,136 | 9,425 | 1 40,931 | 43,575 | : 6,993 | 1 89,477 | 394,523 | | •• | : Dollars | | Walue of production : Cost of production: Net . | (8) | |
| | on. oo | | *** *** *** *** | •• | 8 41.548 | : 21.51: | 11.27 | . 26.11 | 31.15 | 3 111,179 | 8 44.741 | •• | * | : 4/ | | *Dollars *Dollars | Total *Per Acre: Total | Cost of | : (9) : | |
| | 492,108 :110,662 | | ** | 40 | 8,266 : | 946 : | 1,860. | 6,371 | . 20,593 | 36,909 | 4,071. | | 139,70: 413,092 : | | | | | roductions | (10) | |
| - | 110,662 | | | | 3,828 | 670 | \$2 ₂ 276 | 3,054 | 20,338 | . 6,666 œ | . 2,922 | | 1.70,908 | | | Dollars | *Return | Net . | : (11) | |

Parenthetical amounts are duplicated acreages.

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent

Total area zone A reduced by 67 acres urban, 1,641 acres woodland not anticipated to be cleared, and 25,752 acres already drained, not requiring drainage or not anticipated to be drained.

Basin: St. Francis River
Project: Big Creek
Reach: 2
State: Arkansas

SUMMARY - TABLE II B

ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS

COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1) | 1 | (2 | | : | (3) | : (4) | : | (5) | : | (6) | |
|------|----|-----------|----------|----------|-------|------------|------|-------|---------|---------|---|
| Soil | 2 | Land use | and crot | 2 | 2/ | : | Pr | oduct | ion | | • |
| Unit | : | distribu | tion | : | Acres | : Unit | : F | er Ac | res | Total | |
| | : | | | \$ | | : | 2 | : | : | - | |
| All | 8 | Open land | | 2 | 2,029 | 4 | | | : | | |
| | | Crops : | | : | 1,826 | * | : | 3/ | : | | |
| | | Cotton. | | 2 | 681 | :Lbs cLint | 38 | 335 | : | 227,960 | |
| | | Cottons | eed | : : | (681) | : Ton | \$ e | 3013 | . 8 | 205.16 | |
| | : | Corn | | . | 49 | : Bu. | 3 | 19 | | • · 931 | |
| | : | Soybean | s. | : | 392 | : Bu. | : | 19 | | 7,608 | |
| | : | Oats | | • | 271 | : Bu. | : | 26 | : | 7.014 | |
| | : | Oats (S | up.Past) | 3 | (85) | :Lbs.Beef | 8 | 70 | | 5,950 | |
| | 8 | Grain S | | : | 42 | : Bu. | | 23 | 8 | 966 | |
| | : | Perm. P | | | 237 | :Lbs.Beef | 3 | 156 | | 37,020 | |
| | | Idle | | : | 154 | * | : | - 1 | : | | |
| | : | Other | 1/ | : | 203 | : | : | | | | |
| | .W | oodland | | 2 | 2,279 | : Acres | 2 | : | 2 | | |
| | 8 | TOTAL | | : - | 4,308 | ß | 2 | : | 2 | | |
| | 2 | • 1 | 7 - 1 - | 2 | 4/ | : | | , | : | | |
| 1/ | Fa | rmsteads | form ro | o de | weste | and non- | -0.0 | rioul | F1122 d | 27 | |

Farmsteads, farm roads, waste and non-agricultural
Parenthetical amounts are duplicated acreages.
Calculated from Columns 3 and 6; rounded to nearest unit
Total area zone B reduced by 960 acres water and 2,220
acres dedicated to woodland.

Reach: States Basin: Project: St. Francis River Big Creek irkansas ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS SUMMARY - TABLE III B

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT (Based on projected prices) COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION

| woodland TOTAL | Rice Rice Soybeans Oats (Grain) Grain Sorghum | All : Open land : : Crops : Cotton : : | (1): (2): Soil: Land use and crop: Unit: distribution: |
|-----------------------------------|---|--|--|
| 248 248 1,549 4,034 5 | (851) 468 488 184 152 | 2,485 2,237 851 | (3) Acres |
| Acres | Ton Cwt Bu | a Lbs Lint | : (4) |
| | 4298 4298 4008 | 3/ 4777 | s (5) s Production sPer Acres |
| | 365.60 16,380 12,664 7,852 3,832 | 406_230 | (6) |
| 6.40 | 3.75 : 2.30 : 2.53 : 1.53 : | : Dollars : Dollars : | ; (7) ;Value of ;Per Unit; |
| 9,913 | 23,032 61,425 29,127 6,617 5,863 | Dollars 101.557 | : (7) : (8) : (9) : :Value of production:Cost of p :Per Unit: Total :Per Acres |
| | 111.17 : 30.44 : 24.35 : 22.26 : | Dollars: 4/: 125.29: | ; (9) ; on:Cost of p :Per Acres |
| 4,787 : 5,126 186,154 : 51,380 | 52,028 : 14,856 : 4,481 : 3,384 : | Dollars : Dollars : 106.618 : 17.971 | : (7) : (8) : (9) : (10) : (11) :Value of production: Cost of production: Net :Per Unit: Total :Per Acre: Total : Return |
| 5,126 | 9,397 14,271 2,136 2,479 | Dollars 17.971 | (11) Net Return |

Parenthetical amounts are duplicated acreages. Farmsteads, farm roads, waste and non-agricultural

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent

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Total area zone B reduced by 960 acres water, 2,220 acres dedicated to woodland, and 274 acres woodland not anticipated to be cleared.

Reach: State: Project: Basin: St. Francis River Big Creek Arkansas

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS (Based on projected prices) SUMMARY - TABLE IV B

| | | | All | Soil |
|---------------------------|-------------------------------------|--|--------------------------|------------------------------|
| Idle Other Woodland TOTAL | Soybeans Outs (Grain) Grain Sorghum | Crops Cotton Rice | • Open land | ; (2) # Land use and orop |
| 109 403 4,034 5/ | 567 236 | 3,631 1,927 (1,927) 636 | 4,034 | (3) |
| Acres | Bu. | Lbs Lint Ton Cwt | •• •• OUT C | (4) |
| | 25 0 3 ······ | 508 . 4570 . 34 | rer Acres | : (5) : Production |
| | 13,128 9,495 3,858 | 978,550 880.69 21.624 | TOURT | (6) |
| | 2,30 | | Dollars Dollars | Value of |
| 425,853 | 30,195 8,545 5,902 | 244 ₉ 637 55 ₉ 484 81 ₉ 090 | Dollars | (8) production |
| | 28.46 : 24.57 : 21.97 : | 137.22 | Dollars: Dollars Dollars | |
| 359,056 : 66,797 | 16,138 : 5,798 : 3,427 : | 264,420 : 69,273 : | Dollars: | (10): |
| 66,797 | 14,05721 2,7471 2,475 | 35,701 | Dollars | (11) Net |

Calculated from Columns 3 and 6; rounded to nearest unit Parenthetical amounts are duplicated acreages. Farmsteads, farm roads, waste and non-agricultural Calculated from Columns 3 and 10; rounded to nearest cent

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Total area zone B reduced by 960 acres water, 2,220 acres dedicated to woodland, and 274 acres woodland not anticipated to be cleared.

State: Reachs Projects Basin: Big Creek St. Francis River Arkansas

REACH SUMMARY BY SOIL MAPPING UNITS TABLE V

| TOTAL: | Subtotal: | 2SU : | on . | Subtotal: | 44 | 2SU s | | | | Unit : | Soil : | •• | (1) & |
|-----------|---|--|--|--|--|--|--|---|-----------------|--------------------------------------|--|--|--------------------------|
| 9.241 | 4,034 3/ | 1,209 | 2,825 | 5,207 2 | 97 | 3,371 | 766 | 973 | | Acres | | | (2) |
| 635,126 | 237,534 | : 90,807 | •• | 397,592 | : 10,583 | : 275,731 | : 68,507 | 2 42,771 | | : Gross | •• | •• | \$ (3) |
| ± 508,373 | 1 186, 154 | : 68,929 | 117, 225 | * 322,219 | 8,766 | : 219 ₀ 303 | \$ 57 ₀₂₃ | : 37,127 | | * Cost | (Production in | Future Without | : (4) |
| 126_930 | • 51,380 | : 21,878 | ZONE 29,502 | 75,550 | 1,817 | 56,428 | : 11,484 | £ .5,821 1/ | ENOZ ZONE: | a dot | Dollars) | Project | : (5) |
| 1.028.623 | . 425 ₈₅₃ | : 131,320 : | B - (subject to 294,533; | : 602,770 | * 15,285 | 379,083 | : 114,402 : | \$ 94 ₀ 000 | A - (not subjec | : Gross | : (Product | * Future | ; (6) |
| 851.164 | 359,056 | 107,824 : | flooding) 251,232 : | 492,108 : | 12,542 : | 306,945 | 94,359 : | 78,262 : | t to flooding | cost : | ion in Dollar | With Project | (7) |
| 177.459 | 66,797 | 23,496 | 43,301 : | 110,662 | 2,743 | 72,138 : | 20,043: | 15,738 : | (39) | Net : | s) | •• | (8) |
| 50.529 | 15,417 | 1,618 | 13,799 | | 926 | 15,710 | 8,559 | 9,917 1/ | | Net Production | Difference in | | (9) |
| | 9.241 : 635,126 : 508,373 : 126,930 : 1.028,623 : 851,164 : 177,459 : | 4,034 3/ : 237,534 : 186,154 : 51,380 : 425,853 : 359,056 : 66,797 : : : : : : : : : : : : : : : : : : | 1,209 : 90,807 : 68,929 : 21,878 : 131,320 : 107,824 : 23,496 : 4,034 3/ : 237,534 : 186,154 : 51,380 : 425,853 : 359,056 : 66,797 : 9,241 : 635,126 : 508,373 : 126,930 : 1,028,623 : 851,164 : 177,459 : | ZOME B - (subject to flooding) 2,825 : 146,727 : 117,225 : 29,502 : 294,533 : 251,232 : 43,301 : 1,209 : 90,807 : 68,929 : 21,878 : 131,320 : 107,824 : 23,496 : 4,034 3/ : 237,534 : 186,154 : 51,380 : 425,853 : 359,056 : 66,797 : 9,241 : 635,126 : 508,373 : 126,930 : 1,028,623 : 851,164 : 177,459 : | 5,207 2/: 397,592 : 322,219 : 75,550 : 602,770 : 492,108 : 110,662 : 35,112 ZONE B - (subject to flooding) 2,825 : 146,727 : 117,225 : 29,502 : 294,533 : 251,232 : 43,301 : 13,799 1,209 : 90,807 : 68,929 : 21,878 : 131,320 : 107,824 : 23,496 : 1,618 4,034 3/: 237,534 : 186,154 : 51,380 : 425,853 : 359,056 : 66,797 : 15,417 9,241 : 635,126 : 508,373 : 126,930 : 1,028,623 : 851,164 : 177,459 : 50,529 | 97 : 10,583 : 8,766 : 1,817 : 15,285 : 12,542 : 2,743 : 5,207 2 : 397,592 : 322,219 : 75,550 : 602,770 : 492,108 : 110,662 : 2,825 : 146,727 : 117,225 : 29,502 : 294,533 : 251,232 : 43,301 : 1,209 : 90,807 : 68,929 : 21,878 : 131,320 : 107,824 : 23,496 : 4,034 3 : 237,534 : 186,154 : 51,380 : 425,853 : 359,056 : 66,797 : 9,241 : 635,126 : 508,373 : 126,930 : 1,028,623 : 851,164 : 177,459 : | 3,371 : 275,731 : 219,303 : 56,428 : 379,083 : 306,945 : 72,138 : 15,710 : 97 : 10,583 : 8,766 : 1,817 : 15,285 : 12,542 : 2,743 : 926 : 5,207 2/: 397,592 : 322,219 : 75,550 : 602,770 : 492,108 : 110,662 : 35,112 : 2,825 : 146,727 : 117,225 : 29,502 : 294,533 : 251,232 : 43,301 : 13,799 : 1,209 : 90,807 : 68,929 : 21,878 : 131,320 : 107,824 : 23,496 : 1,618 : 4,034 3/: 237,534 : 186,154 : 51,380 : 425,853 : 359,056 : 66,797 : 15,417 | 766 : 68,507 : 57,023 : 11,484 : 114,402 : 94,359 : 20,043 : 8,559 : 3,571 : 275,731 : 219,303 : 56,428 : 379,083 : 306,945 : 72,138 : 15,710 : 97 : 10,583 : 8,766 : 1,817 : 15,285 : 12,542 : 2,743 : 926 : 5,207 2/ : 397,592 : 322,219 : 75,550 : 602,770 : 492,108 : 110,662 : 35,112 : 2,825 : 146,727 : 117,225 : 29,502 : 294,533 : 251,232 : 43,301 : 13,799 : 1,209 : 90,807 : 68,929 : 21,878 : 131,320 : 107,824 : 23,496 : 1,618 : 4,034 3/ : 237,534 : 186,154 : 51,380 : 425,853 : 359,056 : 66,797 : 15,417 | 973 | 70NE A (not subject to flooding) 973 | Acres : Gross : Cost : Met : Gross : Cost : Net Production | ## Acres Gross Cost Not Gross Cost Net Production in Dollars Cost Net Production in Dollars ### Acres Gross Cost Net Production in Dollars ### Acres Gross Cost Net Net Production in Dollars ### Acres Gross Cost Net Net Production in Dollars ### Acres Gross Cost Net Net Production in Dollars ### Acres Gross Cost Net Net Production in Dollars ### Acres Gross Cost Net Net Production in Dollars ### Acres Gross Cost Net Net Production in Dollars ### Acres Gross Net Net Production in Dollars ### Acres Gross Cost Net Net Production in Dollars ### Acres Gross Cost Net Net Production in Dollars ### Acres Gross Cost Net Net Production in Dollars ### Acres Gross Cost Net Net Production in Dollars ### Acres Gross Cost Net Production in Dollars ### Acres Gross Cost Net Production in Dollars ### Acres Gost Net Net Production ### Acres Gost Net Production in Dollars ### Acres Gost Production in Dollars ### Acres Gost Production in Dollars ### Acres Gost Production | # Future Without Project |

Adjusted to eliminate negative net return

anticipated to be cleared.

¹⁰¹⁴ 13 Total area zone A reduced by 67 acres urban, 1,641 acres woodland not anticipated to be cleared, and 25,752 acres already drained, not requiring drainage or not anticipated to be drained.

total area zone B reduced by 960 acres water, 2,220 acres dedicated to woodland, and 274 acres woodland not

Basin:
Project:
Reach:
State:

St. Francis River
Big Creek
2
Arkansas

TABLE VI
LAND CONVERSIONS WITH PROJECT

| (1) : | (2) | : (3) | : (4) : | (5) |
|---------------------------|---------|---------------------------------------|--------------|---------|
| | | : Cost | : Cost : | |
| Type of | Total | : of | : of : | Total |
| Conversion 1/ | Amount | : Clearing | : Smoothing: | Cost |
| - | Acres | : Dollars | : Dollars : | Dollars |
| Per Acre | - | 3 | : : | |
| W to GC | xx | 1 60 | 12.50: | XX |
| W to IC * | - *** | : 60 | : 12.50: | xx |
| W to P | XX | : 60 | t XXt | xx |
| P to GC | XX | : XX | : - 1 | xx |
| P to IC | xx | t XX | : - : | XX |
| GC to IC * | xx | * xx | s xxs | xx |
| GC to P | · *** | t · · XX- | t · xxt | xx |
| : | | | : | |
| * | | * | : : | |
| Project : | | \$ | : | 10 |
| W to GC 8 | 1,987 | : 119,220 | : 24,837: | 144,057 |
| W to IC | 191 | : 11,460 | 2,387: | 13,847 |
| W to P | 26 | 1,560 | xx: | 1,560 |
| P to GC * | - | \$ XX | : -: | - |
| P to IC | | t xx | : -: | - |
| GC to IC | | * XX | * XXt | - |
| GC to P | - | t xx | t XX: | - |
| V 5 | | : | : : | 3 |
| 8 | | . | : | |
| Total project : | XX | : 132,240 | 27,224: | 159,464 |
| | | 1 | : : | |
| Annual amortized value 2/ | xx | t XX | : XX: | 8,735 |
| - 1 | | 1 | : : | |
| Total annual cost of : | 40 4 6. | * 8 *** | 1 1 | |
| conversions : | 双 | * * * * * * * * * * * * * * * * * * * | : XX; | 8,735 |
| | | 1 | : : | |

^{1/} W-woodland; GC- general dry-farmed crops; IC- irrigated crops; (rice); P- pasture

crops; (rice); P- pasture
2/ Amortized over 50 years at 5 percent

| 1/ Do 2/ In | | | æ | | | | , which | | Zone | (1) |
|--|----------------------|---------------------|----------------------------|------------|---------------------|----------------------|--|--|---------------------------------|--------------|
| Does not include 10 percent "other" Includes engineering and contingency | Subtotal TOTAL | 2SU - General crops | 1 - General crops 1 - Rice | * Subtotal | * 4 - General crops | 2SU - General crops: | 2 - General crops 2 - Rice 2 - Pasture | • 1 - General crops • 1 - Rice • 1 - Pasture | *Soil mapping unit | 3 (2) |
| "other" land ntingency | 1,370 1/ 6,056 1/ | 343 | 896 | 4,686 1/ | 87 | 2,913 | 55 58 58 54 59 50 50 50 50 50 50 50 50 50 50 50 50 50 | 263 44 | 13.7 | (3) |
| 3/ Amortize | 21,781 | 5,146 | 15,504 | 68,210 | 1,157 | 43,701 1,126 | 8,790 596 316 | 9,845 2,270 409 | 20 | (4) |
| Amortized over 15 years at | 2,099 8,668 | 496 | 1,494 | 6,569 | 111 | 4,210 | 847 57 30 | 948 219 39 | *Equivalent 2/:Instl.Cost 3/ | (5) |
| at 5 percent | 2,426 | 594 | 1,789 | 7,477 | 133 | 5,042 | 1,014 | 1,136 87 | *Maintenance | (6) |
| | 4,525 | 1,090 | 3,283 | 14,046 | 244 | 9,252 | 1,861 80 37 | 2,084 306 48 | * Annual | : (7) |

Reach:

Arkansas

TABLE VII
ANALYSIS OF FARM DRAINAGE SYSTEM COSTS

Basin: Project:

St. Francis River Big Creek

Basin: Project: Reach: State: St. Francis River Big Creek

2 Arkansas

TABLE VIII

ANALYSIS OF GROUP DRAINAGE NEEDS AND COSTS

| | | | | m 1 3 |
|--------------------------------|---------------|---------------------------------------|--|---------------|
| | : | | Unit: | Total Cost |
| Item | : Unit : | Amount : | Cost : Dollars: | Dollars |
| Excavation 1/ | | | DUITALS | DOTTALS |
| Spreading spoil 1/ | : : | | : | |
| Clearing right-of-way 1/ | :Cubic Yard: | 62,300 : | 0.20: | 12,460 |
| | : : | | | |
| Right-of-way easements | : Acres : | 5 : | 30.00: | 150 |
| On | Each: | 6 | 300.00: | 1 800 |
| Crossings | i Baon : | | 000.00 | . 1,000 |
| Swinging water gaps | : Each : | 8 1 | 40.00: | 320 |
| | 1 1 | | : : | : |
| Pipe drop structures | : Each : | : 2 : | 200.00: | 400 |
| Elan matag | Each | 4 1 | 100.00: | 400 |
| Flap gates | i hach | | 100.000 | 100 |
| Vegetative plantings | : Acres : | . 4 | 8.00: | 32 |
| | : : | , | | |
| Τ | | : | : | 15 500 |
| Total construction cost | \$ XX : | . xx. | XX\$ | 15,562 |
| Engineering cost | 1 XX 1 | xx s | : ************************************ | 1,556 |
| | : 1 | | | |
| Contingencies and legal | : · xx : | XX 8 | XX: | 1,556 |
| | 1; | | . : | ** |
| Total installation cost | · | | ; | 18,674 |
| iotal installation cost | • | V. | | 10,014 |
| Annual equivalent - installati | on cost | | | |
| (amortized for 30 years at | 3½ percent) | | | 1,015 |
| | • . | · · · · · · · · · · · · · · · · · · · | ; : | |
| Annual maintenance cost | | | * | 778 |
| Annual loss of production - r | ight of war | 2/ | | 27 |
| production - 1 | 16110-01-way | 4 . | | 21 |
| Potal annual cost of required | group facilit | ies | | 1,820 |
| | | | 19712 | |

These items included in excavation costs under normal contract procedures.

^{2/} Annual loss of production - right-of-way. 2 acres @ \$13.74 per acre.

Basin: St. Francis River
Project: Big Creek
Reach: 2
State: Arkansas

TABLE IX SUMMARY OF ANNUAL NET PRODUCTION RETURNS AND ASSOCIATED COSTS

| (1) | : (2) : (3) |
|-------------------------------|----------------------|
| | : Discounted |
| Item | : Total : Amount |
| | : Dollars : Dollars |
| | |
| 1. Net return with project. | 177,459 xx |
| 2. Net return without project | 126,930 xx |
| 3. Gross benefit to project | : 50,529 : 31,390 2/ |
| | 02,000 |
| | |
| 4. Farm drainage cost | xx : xx 2/ |
| | · · · |
| a. Installation cost | : 8,668 : xx |
| b. Maintenance cost | 9,903 : xx |
| c. Total | : 18,571 : 11,537 |
| | |
| 5. Group drainage cost | |
| a. Installation cost | : 1,015 : xx |
| b. Maintenance cost 1/ | \$ 805 x x |
| c. Total | : 1,820 : 1,511 |
| | |
| 6. Conversion cost | : xx : xx 2/ |
| a. Installation cost | 8,735 xx |
| b. Mairtenance cost | xx |
| c. Total | |
| O TOTAL | 8,735 5,426 |
| | |

Includes loss of production, right-of-way

Discounted at 5 percent to account for estimated 20 year
lag to full installation, maintenance, and benefit accrual.

Discounted at 3½ percent to account for estimated 10 year
lag to full installation, maintenance, and benefit accrual.

St. Francis River
Ditch # 40
Arkansas

TABLE I
PRESENT LAND USE

| | | | : Urban : | | |
|-----------|----------------------|------------------------|--------------------------------|--|---|
| ping unit | t: (Acres): | (Acres) | (Acres): | (Acres) | (Acres) |
| : 1 | | | : : | - | 35,706 |
| 2 | • | 268 | : - : | - 1 | 39,770 |
| | | 70 | : | - 1 | 246 |
| 1 4 | | 10 | | | 15,251 |
| : 11 | | 112 | | | 13,209 |
| soils | | | | - | 104,349 |
| • | 1 - 1 | - | : 793 : | - 1 | 793 |
| a. | * - * | 3 075 | 707 | | |
| ¥9 b. | 1102,6741 | 1,075 | * 795, \$ | 560 8 | 105,702 |
| : 1 | : 1.486: | 243 | - : | 89 | -1,818 |
| soils | : 1,486: | | | - 1 | 1,818 |
| | 1 - 1 | - | : - : | - 1 | 44 |
| | | | : - : | | 89 |
| , | 1,4861 | 243 | | 89 1 | 1,818 |
| ject | :104,160: | 1,918 | 793 | 649 | 107,520 |
| | ping unit 2 2SU 3 4 | ping unit: (Acres): 1 | ping unit: (Acres): (Acres) 1 | ping unit: (Acres): (Acres): (Acres): 1 | l 34,489: 1,217 - 2 39,502: 268 - 2SU 246: 3 15,173: 78 - 4 167: 4 11: 13,097: 112 - 5011s 102,674: 1,675 793 560 1 1,486: 243 - 89 1,486: 243 - 89 |

Basin: St. Francis River
Project: Ditch # 40
State: Arkansas

SUMMARY - TABLE II A ZONE FOR DRAINAGE CALCULATIONS ONLY COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1) Soil | (2) : Land use and crop : | (3) | : (4) | : (5) Production | : (6) n |
|-------------|---|-------|---|---|---|
| Unit: | distribution : | Acres | : Unit | :Per Acre | : Total |
| All | Open land Crops Cotton Cottonseed Corn Rice Soybeans Oats (Grain) Oats (Sup.Past.) Perm. Pasture Idle Other 1/ Woodland TOTAL | 1,563 | : :Lts.Lint : Ton : Bu. : Cwt. : Bu. : Bu. : Lbs.Beef :Lbs.Beef : | : .2767 : 40 : 30 : 19 : 21 : 70 | 11,504,615 10,354.16 59,532 36,660 313,300 290,483 242,970 980,575 |

1/ Farmsteads, farm roads, waste and non-agricultural
2/ Parenthetical amounts are duplicated acreages.
3/ Calculated from Calcuma 2 and 6 a rounded to record

Calculated from Columns 3 and 6; rounded to nearest unit Total area zone A reduced by 793 acres urban, 560 acres water and 13,964 acres already drained or not requiring drainage.

State: Projects Basin: St. Francis River Ditch # 40 Arkansas

SUMMARY - TABLE III A

COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION, PRODUCTION ZONE FOR DRAINAGE CALCULATIONS ONLY

(Based on projected prices)

COSTS AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT

| 1 | | ** | •• | - | | - | _ | • 1 | | •• | 6.3 | • | | | ~ | All t | | Unit | Soil | E | |
|--|-----------------------------|--------------|----------|--------|-----------------|-----------------|----------------------|---------------|------------|-------------------------|-------------------|-------------------------|-----------|-----------------------------|-----------------------|-----------|--------------------|------------------|---|---------|--|
| Farmsteads, farm roads, waste and non-agricultural | TOTAL : | Woodland - * | Other 1/ | Idle : | Permo Pasture : | Grain Sorghum : | Oats (Sup.Past.) | Oats (Grain) | Soybeans * | Rice | Corn | Cottonseed : | | Cotton : | Crops | Open land | 96 | distribution : | Land use and crop : | (2) | |
| s, waste a | 17,6687 | 678 | 1,699 | 601 | 1,063 | 78 | (605) | 2,418 | 2,401 | 2,355 | 204 | (6,171) | , | 6,171 | 15,291 | 16,990 | | Acres | 2/ | (3) | |
| nd non-agr | . 3' | Acres | •• | •• | :Lbs.Beef | * Bu. | *Lbs.Beef | * Buo | 8 Bun | * Cwt. | · Bu _o | a Ton | | *Lbs.Lint | •• | •• | 40 | * Unit | •• | \$ (4) | |
| icultural | •• •• | •• | •• | •• | : 178 : | 24 • | 3 79 3 | 25 2 | 21 . | 30 • | 43 • | * .3178 * | •• | ្តេស្ត្រ ស្ត្រី ស្ត្រ | * 3/ : | •• | •• | Per Acres | Production | : (5) : | |
| | : | 1 . | | | 189,560 | 1,872 | 48,020 | 59, 289 | 50,726 | 70,650 | 8,772 | 1,961,43 | , | 2,179,360 | | , | | Total | | (6) | |
| | •• | : 3.36 | 40 | •• | 2005 | · 1.53 | . 2005 | . 90 | 2.30 | 8 : 3. 75 | *· 1.45 | : 63,00 | •. | . 25 | •• | •• | :Dollars | Per Unit | *Value of | 2 (7) | |
| | 1,168,872 | 2,278: | •• | •• | \$ 38,007 | 2,864 | s 9,627s | 53,360 | 116,670 | 264,937 : | : 12,719 | 123,570 | | \$ 544,840; | •• • <i>i</i> : | •• | Dollars | * Total | : Value of production : Cost of production: | : (8) | |
| | •• •• | 3: 1.76: | •• | •• | 7: 24.96 : | 1: 21.51 : | 78 6.38.8 | 16.78 : | 26.69 : | 7: 99,96: | 35,99 | | |): 95 _. 16: | : 4/ : | •• | :Dollars ; Dollars | Total :Per Acre: | :Cost of p | : (9) : | |
| | 967,939,200,933 5,202,670 6 | 1,193 : | •• | •• | - | 1,678 : | . 3,858 : | 40,577: | 64,094 : | 235,406 2 | 7,342 : | | •• | 587,256 \$ | •• | •• | Dollars : | Total : | | (10): | |
| | 200,933 5/ | 1,085 | | ٠, | :11,472 | 1,186 | 5,769 | 12,783 | 52,576 | 29,531 % | 5,377 | | 82.891 6/ | 81,154 5/ | | | Dollars | Return | Net | (11) | |

Parenthetical amounts are duplicated acreages.

Calculated from Columns 3 and 10; rounded to nearest cent Calculated from Columns 3 and 6; rounded to nearest unit

Includes calculated negative net return

Total area zone A reduced by 793 acres urban, 560 acres watered, 885 acres woodland not anticipated to be Adjusted to eliminate negative net return cleared, and 85,796 acres already drained, not requiring drainage or not anticipated to be drained.

Besins Sto Francis River Projects Ditch # 40 Arkansas

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE CALCULATIONS ONLY (Based on projected prices) SUMMARY - TABLE IV A

| ** ** ** ** ** ** | . 00 E0 90, 00 88 88 E2 85, cs ss | All s | (1) Soil : Unit |
|--------------------|---|--------------------|--|
| Other 1/ TOTAL | Crops Cotton Cottonseed Corn Rice Soybeans Oats (Grain) Oats (Sup.Past.) Grain Sorghum Perm. Pasture | Open land | (2) Land use and crop distribution |
| 1,766 1,766 | | 17,668 | $ \begin{array}{c} (3) \\ \underline{2}/\\ \text{Acres} \end{array} $ |
| Acres | Lbs.Lint Ton Bu. Cwt. Bu. Bu. Bu. Lbs.Beef Lbs.Beef | v v | (4) Unit |
| | 55376 55376 55376 55376 55376 55376 | ••. | : (5) : Production Per Acres |
| | 4, 116,090 3,704,47 19,603 74,340 84,262 87,002 71,380 3,120 142,440 | | , (6) Total |
| a• •• •• •• •• | 63 00 1 45 1 5 00 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 | Bollars | • (7) •Value of •Per Unit |
| 1,889,353 | 1,029,022 233,3823 28,4253 278,775 193,8023 14,3123 4,7743 28,559 | Dollars | (7) : (8) : (9) : (10) : Jalue of production: Cost of production: Per Unit : Total : Per Acre: Total : |
| | | EDollars : Dollars | : (9) : Cost of p |
| 1,516,162: 373,191 | 46.48: 16.499: 11.926 111.17: 236.125: 42.656 30.04: 99.449: 94.353 25.97: 52.956: 25.346 112.04: 6.502: 7.816 21.51: 2.796: 1.978 43.18: 19.432: 9.123 | Dollars | (10) : roduction: |
| 373,191 | 180,001 .11,926 .42,650 .94,353 .25,346 .7,810 .1,978 .9,127 | Dollars | (11) Net Return |

Farmsteads, farm roads, waste and non-agricultural Parenthetical amounts are duplicated acreages.

Parenthetical amounts are duplicated acreages, Calculated from Columns 3 and 6; rounded to neatest unit

Total area zone A reduced by 793 acres urban, 560 acres watered, 885 acres woodland not anticipated to be Calculated from Columns 3 and 10; rounded to nearest cent cleared, and 85,796 acres already drained, not requiring drainage or not anticipated to be drained.

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Basin: St. Francis River
Project: Ditch # 40
State: Arkansas

TABLE II B 1/
ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS
COMPUTATION OF AGRUCULTURAL PRODUCTION: EXISTING CONDITIONS

| (1): Soil: Unit: | (2) Land use and crop a distribution | (3) Acres | | : (5) : Production :Per Acres | |
|------------------------|--|---------------------|-------------------------------|-------------------------------------|---|
| 1 : | Open land Crops Cotton Cottonseed Soybeans Oats (Grain) Perm. Pasture Idle Other 2/ Woodland TOTAL | (495) 388 308 | Lbs.Lint Ton Bu. Bu. Lbs.Beef | : .1890 : 14 : 16 : | 103,950 93,55 5,432 4,928 5,800 |

1/ One soil only; no summary required
2/ Farmsteads, farm roads, waste and non-agricultural
3/ Parenthetical amounts are duplicated acreages.
4/ Total area zone B reduced by 89 acres water.

State: Basin: Project: Sta Francis River Ditch # 40 Arkansas

Soil \$

ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS

Net Return

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION

Woodland Land use and crop Open land Crops distribution Corn Rice Other : Idle Soybeans Cottonseed Oats (Grain) Cotton Perm. Pasture Oats (Grain Acres 607 ,446 434 (578) 578 144 116 161 (36)*Lbs Beef : Lbs Beef Lbs.Lint : Ton Cwt. Buo Production .3600 PerAcre: 33 (Based on projected prices) 231,200 208.08 4,608 3,828 1,624 :Per Unit : Total Dollars. Walue of production : Cost of production: -2005 3.75 63,00 2.30 1.45 .90 : Dollars 20,962 14,355 13,109 57,800 2,355 361 . :Dollars :Dollars :Per Acre: Total 104.72 : 106.67 20.22 26.98 60,528 : 12,374 11,709 1,424 Dollars 10,381

Farmsteads, farm roads, waste and non-agricultural no summary required

TOTAL

24,673

9,253 1,981

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,235

Parenthetical amounts are duplicated acreages. 70,00 percent cropland drained.

Total area zone B reduced by 89 acres water and 85 acres woodland not anticipated to be cleared.

State: Project: Basin Ditch # 40 Sto Francis River Arkansas

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS (Based on projected prices)

| 1. | •• | •• | • | | • | •• | •• | | | | | • | <u>بر</u> | | Unit | Soil : | 3 |
|----------------------|--------------------|---------|---------|--------|---------------|-------------------|------------------------|-----------------------|-----------|--------------------------|--------------|---------|-----------|-------------------|--------------------------|---|--------------|
| One sail and the man | TOTAL | | Other 2 | | Permo Pasture | Oats (Sup. Past.) | Oats (Grain) | Soybeans | Rice | Cottonseed | Cotton | Crops | Open Land | | distribution | Land use and crop | (2) |
| 2 | 1,6445/ | | 164 | • 44 | * 44 | 1 (53) | 266 | 355 | : 104 | : (667) | s 677 | : 1,480 | 1,644 | ** | a Acres | - 3 | : (3) |
| | · · | * Acres | •• | •• | *Lbs.Beef | *Lbs.Beef | : Bu. | : Bu. | * Cwt. | * Ton | *Lbs.Lint | •• | | •• | * Unit | •• | : (4) |
| •• | ; | | •• | •• | 285 : | : 70 : | 2 39 . 3 | 23 : | 35 | : .4230 : | ° 470 ° | : 4/: | •• | •• | :Per Acre: | Production | : (5) |
| | | | ., | n N | 12,540 | 3,710 | 10,374 | ·8,165. | 3,640 | 282,14. | 313,490 | ., | | | Total | • | (6) |
| •• | •• •• | •• | •• | •• | 2005 | 2005: | . 90: | 2 .30 : | : 3.75: | \$ 63.00 : | . 25: | | •• | · Dollars · | *Per Unit * Total | : Value of production : Cost of production: Net | : (7) : |
| | 141,171 | | | - - | 2,514 | : 744 | 9,337 | 18,779 | سر | 17,775 | 78,372 | | | Dollars | | roduction | (8) |
| •• | | •• | •• | •• | 39.32 | 5.371 | 23.75: | 28.27: | : 111,17; | •• | : 122.25: | •• | •• | : Dollars: | Per Acre: Total : Return | Cost of p | : (9) : |
| 0.0 | : 111,471 : 29,700 | •• | : | •• | 1,730 : | 285 * | 6,317: | 10,036 : | 11,562 : | •• | 81,541 : | •• | •• | Dollars : Dollars | Total : | roduction: | : (01) |
| | 29,700 | | | | 784 | 459 | 3,0203 | 8,743 | 2,088 | | 14,606 | | | Dollars | Return | Net | (11) |

One soil only; no summary required

Parenthetical amounts are duplicated acreages. Farmsteads, farm roads, waste and non-agricultural

96,84 percent cropland drained

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Total area zone B reduced by 89 acres water and 85 acres woodland not anticipated to be cleared.

State: Project: Basin: Ditch # 40 St. Francis River Arkansas

> PROJECT AREA SUMMARY BY SOIL MAPPING UNITS TABLE V

| 4 A. 3.3 | The state of the s | | | | | | | | 2 41 |
|-----------------|--|----------------------|-------------------------|-----------------------------------|-------------|-------------------------|-----------------------------------|----------------------------------|------------|
| , | 175,54 | 402,891 : 175,548 | 1,627,633 | 2,030,524 | 227,343 | 1,058,516 | 1,284,122 | ₂ 19 ₃ 312 | TOTAL |
| 27 | 5,027 | 29,700 | 111,471 | 141,171 : | 24,673 | 90,577 | 115,250 | 1,644 3/ | Subtotal |
| -13 | 5,027 | 29,700 | 111,471 | 141,171 3 | 24,673 | 90,577. | 115,250 | 1,644 | بر : |
| 4- | : 170,52 | 373,191 : 170,521 | 1,516,162 | 1,889,353 | 202,670 | 967,939 | 1,168,872 | 17,668 2/: | Subtotal : |
| 7 | | 61,110. | 195,026 . | .256,136 :. | 43, 239 | 136,791 : | 180,030 | 2,883 | C3 , |
| 28 1/ | 66,922 <u>1</u> / | 113,004 | 755,347 | 678,793 * 954,424 * | 113,349 1/8 | 354 ₉ 984 3 | 399,329 3 589,513 2 | 7,095 7,690 | 70 H |
| the same of the | | | t subject to fleeding) | - (not subject | ZONE A | | | | p- 4 |
| duction | :Net Production | Net | Cost | Gross. : | Net . | Cost : | Gross : | Acres | Unit. 3 |
| Difference in | *Differe | A subdiving a second | (Production in Dollars) | (Product | Ars) | (Production in Dollars) | (Prod | | Soil. |
| | •• | | Future With Project | Frture | ject | Future Without Project | Lutur | | |
| 9 | : (9) | (8) | (7): | (6) | (5): | (4) | (3) | (2) | (1) |
| | | | | | , | | | | - |

Adjusted to eliminate negative net return

¹⁰⁰¹⁴ 13 Total area zone B reduced by 89 acres acres water and 85 acres woodland not anticipated to be cleared. Total area zone A reduced by 793 acres urban, 560 acres watered, 885 acres woodland not anticipated to be cleared and 85,796 acres already drained, not requiring drainage or not anticipated to be drained.

Basin:

St. Francis River Project: Ditch # 40
State: Arkansas

TABLE VI LAND CONVERSIONS WITH PROJECT

| (1) | (2) | (3) | : (4) | (5) |
|-------------------|-----------|----------|--------------|---------|
| : | : | Cost | : Cost | |
| Type of | Total : | of | s of | Total |
| Conversion 1/ | Amount : | Clearing | :Smoothing : | Cost |
| | Acres : | Dollars | : Dollars | Dollars |
| Per Acre | : | | : | |
| W to GC | · xx : | 50 | : 15 | xx |
| W to IC | xx : | 50 | : 15 | xx |
| W to P | xx : | | :. xx | xx |
| P tp GC | · xx : | . XX | : - | xx |
| P to IC | XX S | xx | : - | XX |
| GC to IC | xx : | XX . | * XX : | xx : |
| GC to P | . xx : | · xx | : XX | xx |
| | * * * * | | : . | |
| | : | | : , | |
| Project | : | | 2 | 2 |
| W to GC | 592 : | 29,600 | : 8,880 | 38,480 |
| W to IC | 123 | 6,150 | : 1,845 | 7,995 |
| W to P | - : | - | : XX | - |
| P to GC | 234 : | xx · | : - : | - |
| P to IC | 85 : | xx | : - | : - |
| GC to IC | - : | xx | : xx | - |
| GC to P | | xx | : xx | - |
| | | | .: | : |
| | | | : | |
| Total project | xx : | 35,750 | : 10,725 | 46,475 |
| | | | * / | |
| Annual amortized | *** | | : ; | : |
| value 2/ | xx : | xx | : XX | 2,546 |
| T | | | : | |
| Total annual cost | 1 2 4 2 2 | | 1; | |
| of conversions | XX : | The XX | s xx | 2,546 |
| | : | • • | * | |

W-woodland; GC - general dry-farmed crops; IC - irrigated crops; (rice); P -pasture.

Amortized over 50 years at 5 percent

Basin: St. Francis River
Project: Ditch # 40
State: Arkansas

TABLE VII ANALYSIS OF FARM DRAINAGE SYSTEM COSTS

| 1 Do 2 In 3 Am | | | | ₩ | | | | | | A | Zone | | (1) | |
|---|------------|------------|-------------------------|---------------------|------------|---------------|------------------|----------|---------------------------------------|---------------------|------------------|---------------------|--------------|--|
| Does not include 10 percent "other" Includes engineering and contingency Amortized over 15 years at 5 percent | TOTAL | : Subtotal | 1 - Rice 1 - Pasture | : 1 - General crops | : Subtotal | * 3 - Pasture | 2 - Pasture | 2 - Rice | L RICO | • 1 - General crops | and land use | : Soil mapping unit | 1 (2) | |
| "other" land tingency percent | 16,368 1/s | 466 1/3 | 14 ± | 430 | 15,902 1/: | 104 | 346 : 2,491 : | 208 : | * * * * * * * * * * * * * * * * * * * | Acres 4,470 | : Area : I | •• | (3) | |
| | 246,244 | 7,760 | 190 | 7,440 | 238,484 | 968 | 3,220 | 1,795 | | 77,345 | Installation 2/ | | Total | |
| | 23,722 | 3 748 | 18 | * 717 | 22,974 | 93 | 310 | 173 | | 1011ars 7,451 | : Instl. Cost 3/ | * Equivalent | : (5) | |
| • | 28,297 | 868 | 3 7 | 858 | 27,429 | 2 74 | 6.631 | 69 | | 8,924 | : Cost | * Maintenance | : (6) | |
| | . 52,019 | 1,616 | 25 | 1,575 | 50,403 | 167 | 384 | 20, 223 | | : 16,375 | Cost | * Annual | : (7) | |

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Basin: St. Francis River
Project: Ditch # 40
State: Arkansas

TABLE VIII
ANALYSIS OF GROUP DRAINAGE NEEDS AND COSTS

| Item | unit | Amount | : Unit | Total Cost |
|---|------------|-----------|----------|------------|
| Excavation 1/ Spreading spoil 1/ Clearing right-of-way 1/ | Cubic Yard | 76,200 | 0.20 | 15,240 |
| Right-of-way easements | • · · · | - | ; ; – | ··· |
| Crossings | Each | 10 | : 300.00 | 3,000 |
| Swinging water gaps | Each | 10 | 40.00 | 400 |
| Pipe drop structures | Each | 3 | 200,000 | 600 |
| Flap gates | : - | - | : - | 3 |
| Vegetative plantings | : Acres | 40 | 8.00 | 320 |
| Total construction cost | 1 XX 11 | xx | s xx | 19,560 |
| Engineering cost | xx | xx | \$ xx (| 1,956 |
| Contingencies and legal | xx : | xx | t XX | 1,956 |
| | | | | |
| Total instal lation cost | | | | 23,472 |
| Annual equivalent - installation (amortized for 30 years at 3 | n cost | | | 1,276 |
| Annual maintenance cost | | | | 978 |
| Annual loss of production - righ | nt-of-way | | | 310 |
| otal annual cost of required gr | • | es | | 0.054 |
| | | | : | 2,254 |

^{1/} These items included in excavation costs under normal contract procedures.

Basin:
: Project:
: State:

St. Francis River
Ditch # 40
Arkansas

TABLE IX
SUMMARY OF ANNUAL NET PRODUCTION RETURNS
AND ASSOCIATED COSTS ...

| | (1) | (2) | (3) Discounted |
|----|----------------------------|---|-------------------|
| | Item | Total | Amount |
| | | : Dollars | Dollars |
| 1. | Not woturn with project | 402 801 | |
| 2. | Net return with project | • 402,891 · · | XX |
| | Net return without project | 227,343 | XX 7.00 054 0/ |
| 3. | Gross Benefit to project | : 175,548. | 109,054 2/ |
| | | *************************************** | |
| 4. | Farm drainage cost | XX | xx 2/ |
| ±0 | a. Installation cost | 23,722- | grasi |
| | | • | XX |
| | | : 28,297 | XX |
| | c. Total | 52,019 | 32,315 |
| _ | | | |
| 5. | Group drainage cost : | \$ XX | $\times \times 3$ |
| | a. Installation cost | 1,276 | xx |
| | b. Maintenance cost 1:/ | 978 | xx |
| | c. Total | 2,254 | 1,872 |
| | : | : | |
| 6. | Conversion cost : | a xx | xx 2/ |
| | a. Installation cost | 2.546 | . xx |
| | b. Maintenance cost | · · · · · · · · · · · · · · · · · · · | |
| | c. Total | 2,546 | 1,582 |
| | | 2,010 | 2,000 |

1/ Includes loss of production, right-of-way
2/ Discounted at 5 percent to account for estimated 20 year

lag to full installation, maintenance, and benefit accrual.

Discounted at 3½ percent to account for estimated 10 year lag to full installation maintenance, and benefit accrual.

Basin: Project: Reach: St. Francis River
Ditch # 1
The Arkansas

State:

TABLE I PRESENT LAND USE

| | :Soil map- | 2 Open : | Vooded: | Urban | · Water | Total |
|--|------------|----------------------|-------------|-----------|-----------|----------|
| Zone | sping unit | | | | | |
| | : | : : | : | | 8 | : |
| Zone A | : 1 | : 3,240 : | es 5 | ess | : 12 | 3,240 |
| | 8 2 | : 2,697 : | 1: | | 8 - | : 2,697 |
| and the same of th | s · 2SU | : 3,044 : | : | - | \$ 'ca' . | : 3,044 |
| | : lisu | 3 . 11 . | , | - | 8 | : 11 |
| Subtotal - al | l soils | 3 8,992 8 | - ; ; | | \$ en . | 8, 8,992 |
| Urban | | \$; - \$ | - : 1 | 54 | 3 - | \$ 54 |
| Water | | 2 - 1 | 1 | î . 🖦 | 20 | 20 |
| Total - Zone | A | : 8,992 8 | - : 3 | 54 | 2 20 | : 9,066 |
| | | : 1 | | | 811 | . |
| Zone B | : 1 | : 4,747 : | 119:: | • | : - | 4,866 |
| | 1 2 . | : 16: | | - | | : 16 |
| | 2SU | : 1,304 : | 355 : : | (| 8 | : 1,659 |
| Subtotal - al | l soils | : 6,067 : | 474 : | 80 | 3 - | : 6,541 |
| Urban | ~ | \$ | | | 3 | s |
| Water | | : | -; : | - | : 211 | : 211 |
| Total - Zone | В | : 6,067 : | 474: 8 | - | : 211 | 1.6,752 |
| CDAND MOMAL D | 10_ | 1. 1 | | 1 | \$.5 | 3 |
| GRAND TOTAL - R | each 1 | :15,059 : | 474 ; : | 54 | : 231 | :15,818 |
| | 8 | : : | . : | | \$. The | |

Basin: St. Francis River
Project: Ditch # 1
Reach: 1
State: Arkansas

SUMMARY - TABLE II A ZONE FOR DRAINAGE CALCULATIONS ONLY COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1) | : (2) | (3) | : (4) : (5) : (6) |
|------|-----------------------|----------|----------------------------|
| Soil | : Land use and crop : | 2/ | : Production |
| Unit | : distribution : | Acres | : Unit :Per Acre: Total. |
| • | 2 | | 1 1 |
| A11 | : Open land | 8,936 | |
| | : Crops | 8.043 | : 3/: |
| | : Cotton | 4.400 | :Lbs.Lint : 318 :1,398,950 |
| | : Cottonseed | (4,400) | : Ton : .2861 : 1.259.05 |
| | : Soybeans | 1.584 | Bu. : . 20 : 31.682 |
| | : Oats (Grain) | 855 | : Bu. : 22 : 18,605 |
| | : Oats (Sup.Past.) : | (265) | :Lbs.Beef: :70: 18.550 |
| | : Grain Sorghum : | 121 | : Bu. : 23/: 2,783 |
| | : Perm. Pasture | 477 | :Lbs.Beef : 145 : 69,165 |
| | : Idle | 606 | |
| | : Other 1/ | 893 | |
| | :Woodland | - | : Acres : |
| | : TOTAL : | 8,936 4/ | |
| | : | | |
| - | | | |

^{1/} Farmsteads, farm roads, waste and non-agricultural

Parenthetical amounts are duplicated acreages.

Calculated from Columns 3 and 6; rounded to nearest unit

Total area zone A reduced by 54 acres urban, 20 acres water, and
56 acres already drained or not requiring drainage.

State: Reach: Basin: Project: St. Francis River Ditch # 1 Arkansas

SUMMARY - TABLE III A

ZONE FOR DRAINAGE CALCULATIONS ONLY

COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PROJUCTION, PRODUCTION COSTS AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT

(Based on projected prices)

| الماماك | | Soil Unit |
|--|---|--|
| Farmsteads, farm roads, waste and non-agricul Parenthetical amounts are duplicated acreages Calculated from Columns 3 and 6; rounded to Calculated from Columns 3 and 10; rounded to | Open land Crops Cotton Cottonseed Corn Soybeans Oats (Grain) Oats (Sup.Past.) Grain Sorghum Perm. Pasture Idle Other Idle Other TOTAL | Land use and crop and distribution |
| are duplicates 3 and 6; as 3 and 10; | 2,549 2,294 1,212 (1,212) 13 454 275 (96) 115 99 126 255 2,549 7 | (3) Aores |
| and non-agricultural licated acreages 6; rounded to neare 10; rounded to near | Ton Bu. Bu. Bu. Bu. Bu. Acres | Unit |
| non-agricultural ed acreages rounded to nearest unit rounded to nearest cent | 341 341 3071 43 22 25 24 191 | : (5) : Production :Per Acre: |
| 4 | 413,565 372,21 559 10,091 6,852 8,960 2,791 18,930 | Total |
| Includes calculated negative net return Adjusted to eliminate negative net return Total area zone A reduced by 54 acres urban, 20 acres water, and 6,443 acres already drained, not requiring or not anticipated to be drained | 63.00 1.45 2.30 .2005 1.53 | : (7) : :Value of pr :Per Unit: |
| ncludes calculated negative net return djusted to eliminate negative net return otal area zone A reduced by 54 acres urban, 20 acres water, and 6,443 acres already drained, not requiring or not anticipated to be drained. | 103,391 23,450 811 23,209 6,167 1,796 4,270 3,795 | (8) oduction Total Dollars |
| gative net negative ne ced by 54 a 3 acres ala anticipated | 35.99 37.45 16.99 16.99 27.15 | : (9) : (10) :Cost of product1 :Per Acre: Total |
| return et return acres urban ready drain i to be dra | 112,908:13,935 :14,506 :14,506 468: 343 12,462:10,747 4,673: 1,494 4 756: 1,040 2,494: 1,776 2,688: 1,107 136,449:30,440 :31,0136 | :: (9) : (10) : (11) :Cost of production: Net :Per Acres: Total : Return :: Dollars: Dollars |
| n, 20 ned, | 343 343 343 343 343 343 343 343 343 343 | i (11) on: Net Return |

State: Reach: Project: Basin: Arkansas Ditch # St. Francis River

PRODUCTION COSTS, AND NET RETURNS: FUTUPE CONDITIONS WITH PROJECT ZONE FOR DRAINAGE CALCULATIONS ONLY (Based on projected prices) SUMMARY - TABLE IV A

(5)

: (8)

9

| Ĩ | | 1.3 | 41. | | * | 1 e | źn | | | | | | | | A11 | | Unit | Soil |
|--|--|----------------|------------------------------|---------------------------------------|--------------|-----------------|--------------------|----------------------|------------------|--------------|------------|--|--------------------|--|-------------|------------|------------------|---|
| Farmsteads, farm roads, waste and non-agricultural | of fluid | TOTAL : 2 | sWoodl and | 1 Other 1/ | Idle :s | Perm. Pasture : | : Grain Sorghum :: | 3 Oats (Sup. Past.): | · Oats (Grain) · | : Soybeans : | * Corn | : Cottonseed :: | 2 Cotton 3 | * Grops :: :: | • Open land | | a distribution 3 | a Land use and crop |
| is, waste a | 7. 1 | 2.549 57 | | 255 | 109 | 99 | 115 | (84) | 241 | 453 | -13 | (1,264) | 1,264 | 2,294 | 2,549 | A | Acres | 22 |
| nd non-agr | 40 . (| • | Acres | •• | ** | :Lbs.Beef | * Bu. | *Lbs.Beef | * Bu. | * Bu. | : Bu. | * Ton | :Lbs Lint | | : 3 | | * Unit | |
| icultural | | H | | | •• | * 311 | 1 27 | 137 | * 42 | . 26 | . 70 | : .5072 | \$ 564 | 3/ | | oo oo | :Per Acres | Production |
| | The same of the sa | | May a special and the second | Make Character and a 12 highlights of | | 30,780 | 3,064 | 11,540 | 10,231 | 11,623 | 010 | 641.06 | 712,290 | | * · | | · Total | |
| | A Company of the Comp | HB | * | d Appendix to | The same way | * 2005 | . : 1.53 | . 2005. | .90 | . 2.30 | * 1.45 | * 63,00 | . 25 | | • | : Dollars | Per Unit : Total | *Value of |
| | | 268 891 | •• | | •• | : 6,171 | : 4,688 | 8 2,314 | : 9,207 | : 26,733 | : 1,319 | : 40,387 | : 178,072 | - 1 | | : Dollars | : Total | Value of production : Cost of production: Net |
| | ** | | •• | | ** | 8 42,49 | : 23.16 | 12.61 | \$ 25.84 | 30.22 | : 67.25 | ************************************** | : 149.08 | • 4/ | · · | . Dollars: | Per Acres | *Cost of |
| | | 217 154 51 737 | | | - | 4 207 | 2,663: | 1,059: | · 6,228 | : 13,688° | 874 | 1 | : 188,435 : 30,024 | ************************************** | | : Dollars | Lotal | production |
| | () () () () () () () () () () | 51 737 | î i | | | 1,964 | 2,025 | 1,2651 | 2,9794 | 13,045 | 445 | ************************************** | 30,024 | 4.5 | 43. | Dollars | Return | Net |

Parenthetical amounts are duplicated acreages.

Total area zone A reduced by 54 acres urban, 20 acres water, and 6,443 acres already drained, not requiring drainage or not anticipated to be drained.

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent

Basin: St. Francis River
Project: Ditch # 1
Reach: 1
State: Arkansas

SUMMARY - TABLE II B

ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS

COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1) : | .(2) | (3) | : (4) .: (5) : | (6) |
|--------|---------------------|---------|-----------------------------|-----------|
| Soil : | Land use and crop : | 2/ | : Production | |
| Unit : | distribution : | Acres | : Unit :Per Acre: | Total |
| : | | | : | K P LU |
| A11 : | Open land | 6,067 - | \$ - 10 11 00 18 00 1 10 18 | 77 |
| | Crops : | 5,460 | : : 3/ : | War Com P |
| | Cotton | 2,687 | :Lbs.Lint: 257 | 690,705 |
| * | Cottonseed : | (2,687) | : Ton : . 2313 : | 621.63 |
| | Rice | 85 | : Cwt. : 30 : | 2, 550 |
| * | Soybeans : | 933 | : Bu 18 1 | 16,485 |
| | Oats (Grain) | 803 | : Bu. : 19 : | 15,198 |
| 2 | Oats (Sup.Past.): | (89) | Lbs.Beef: 70 : | 6,230 |
| | Perm. Pasture | | Lbs.Beef: 145 | 22,475 |
| | Idle | 797 | | |
| | Other 1/ | 607 | 8 8 8 | |
| | Woodland | 474 | Acres: | |
| 1 | TOTAL | 6.541 | 5A | |
| 2 | | 4/ | | |
| - | | | | |

Farmsteads, farm roads, waste and non-agricultural
Parenthetical amounts are duplicated acreages.
Calculated from Columns 3 and 6; rounded to nearest unit
Total area zone B reduced by 211 acres water.

Basin: St. Francis River Project: Ditch # 1
Reach: Arkansas

PRODUCTION COST, AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS (Based on projected prices) SUMMARY - TABLE III B

| | 1 | | | | | | | | | | | | | | 1 | | | |
|--|------------------|----------|----------|------|---------------|---------------|------------------|----------------|----------|------------|------------|-------------|-------|-----------|-------------------|-----------------|---|---------|
| Ţ | | | | | | | | | | | | | | All | | Unit | Soil | E |
| ' | 00 00 | •• | 40 | •• | •• | •• | •• | •• | ** | •• | •• | • | •• | •• | •• | •• | •• | •• |
| Farmsteads. farm roads. waste and non-agricultural | TOTAL | Woodland | Other 1/ | Idle | Perm. Pasture | Grain Sorghum | Oats (Sup.Past.) | Oats (Grain) | Soybeans | Rice | Cottonseed | Cotton | Crops | Open land | | distribtuion | Land use and crop | (2) |
| ds | OR 80 | •• | 90 | | • | •• | 90 | 90 | 90 | | •• | •• | ~ | •• | •• | •• | •• | 40 |
| . waste and | 6,2335/ | • | 623 | 794 | | 367 | (65) | 561 | 1,036 | 172 | (2,589) | 2,589 | 1 | 6,233 | | Acres | 2/ | (3) |
| non-agricu | n4 s5 | Acres : | •• | •• | *Lbs.Beef : | Bu. | *Lbs.Beef : | Bu. s | Bu | Cwt | Fon . | albs.Lint : | • | •• | •• | Unit : | ٠ | * (4) |
| ltural | | ,••. | | •• | 270 | 23 | 130 * | 36 8 | 23 : | 34. 8 | .4061 : | 451 * | 100 | •• | :, | Per Acres Total | Froduction | (5) |
| | | | | | 24,570 | 8,464 | 8,450 | 19,984 | 23,576 | 5,848 | 1,051,52 | 1,168,355 | | | | | | (6) |
| | 44 00 | •• | | | 2005 | 1.53 : | 2005 | . 90 . | 2.30 : | 3.75 : | 63.00 : | . 25 : | •• | •• | Dollars : | Per Unit : | Walue of production : Cost of production: Net | : (7) : |
| | 472,046 | | | | 4,926 | 12,950 | 1,694 | 17,986 | 54,225 | 21,930 | 66,246 | 292,089 | | | Dollars | Total | roduction | (8) |
| The state of the s | | •• | •• | •• | : 37.48 : | : 20,93 : | : 11.83: | 22, 03 | : 28.23: | : 108.92 : | ** | : 119.28 : | . 4 | ** | : Dollars: | Per Acre: | *Cost of pi | : (9) : |
| - | 381,021 : 91,025 | •• | •• | | 3,411 : | 7,681 8 | 769 : | 12,357 : | 29,243 : | 18,734 : | •• | : 308,826 : | •• | *** | Dollars : Dollars | Total : Return | roduction: | : (01) |
| | 91,025 | | | | 1,515 | 5,269 | 925 | 5,629 | 24,9824 | 3,196 | | 49,509 | | | Dollars | Return | Net | (11) |

rmsteads, farm roads, waste and non-agricultur

Parenthetical amounts are duplicated acreages.

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent

[जिमिलिलि

Total area zone B reduced by 211 acres water and 308 acres woodland not anticipated to be cleared.

States Reach: Project: Basin: Ditch # St. Francis River Arkansas

SUMMARY - TABLE IV B

PRODUCTION COST, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS (Based on projected prices)

| 2/- | | | | | | | | | | | | | | | | All | | Unit | Soil | (I) |
|--|----|-------------------|-----------|------------|--------|-----------------|----------------------|--------------------|----------------|------------|------------|---------|-------------------------|------------|---------|-------------|------------|------------------|---|---------|
| Farmsteads, form roads, waste and non-agricultural | •• | * TOTAL | *Woodland | : Other 1/ | : Idle | · Perm. Pasture | : Grain Sorghum | : Oats (Sup.Past.) | a Oats (Grain) | * Soybeans | * Rice | : Corn | : Cottonseed | : Cotton | : Crops | s Open land | | * distribution | : Land use and crop | : (2) |
| s, waste an | 2/ | : 6,233_/ | 1 | 623 | 380 | 9 91 | 280 | : (58) | 552 | : 1,252 | 129 | 129 | : (2,797) | 2,797 | : 5,610 | 8 6,233 | •• | Acres | 2/ | : (3) : |
| d non-agric | • | | * Acres | •• | : | :Lbs.Beef | Bu. | *Lbs.Beef | Bu. | Bu. | * Cwt. | Bu. | * Ton | :Lbs.Lint | •• | •• | •• | * Unit | •• | : (4) |
| ultural | •• | •• | | •• | •• | : 300 : | 25 . | 140 : | 39 : | 24 : | 35 | 33 * | · 4522 · | 502 * | : 3/: | •• | •• | Per Acre: | Production | : (5) : |
| | | | | | | 27,300 | 6,980 | 8,120 | 21,444 | 30,096 | 4,515 | 4,257 | 1,264.68 | 1,405,205 | | | | Total . | | (6) |
| | •• | •• | | •• | •• | 2005 | 1.53: | 2005 | . 90 : | 2.30: | 3.75 : | 1.45: | 8 63.00 8 | . 25 . | •• | •• | Dollars | Per Unit : Total | Walue of production : Cost of production: | (7) |
| | , | 560,383 | | , | •• | 5,474 | 10,680 | 1,628 | 19,300 | 69,221 | 16,931 | 6,173 | 79,675 | 351,301 | | | Dollars | | roduction | (8) |
| | •• | •• | fo 1 | :: | •• | 41.16 | 22 ₀ 09 : | 12.89 : | 23.73 : | : 29.03 : | : 111.17 : | 27.78 : | •• | * 134°21 * | : 4/: | •• | :Dollars : | :Per Acre: | *Cost of p | : (9) : |
| | •• | 453,441 : 106,942 | | •• | •• | 3,746 : | 6,184 : | 748 : | 13,097 : | •• | 14,341: | 3,584 : | •• | 375,390 : | • | •• | Dollars: | Total : | oduction: | (10) |
| | • | 06,942 | | | •• | 1,728 | 4,496 | 980 | 6,203 | 32,870 | 590 | 2,589 | | 55,586 | | | Dollars | Return: | Net ; | (11) |

Parenthetical amounts are duplicated acreages.

Calculated from Columns 3 and 10; Calculated from Columns 3 and 6; rounded to nearest unit rounded to nearest cent

Total area zone B reduced by 211 acres water and 308 acres woodland not anticipated to be cleared.

| . (1 | 77 | (9) | |
|------|----|-------------------|----------|
| | | | |
| | | Arkansas | States |
| | | <u></u> | Reach: |
| | | Ditch # 1 | Project; |
| | | St. Francis River | Basin: |

REACH SUMMARY BY SOIL MAPPING UNITS

| TOTAL 8 8,782 | Subtotal 8 6,233 | 1 3 4,789 2SU 3 1,444 | Subtotal: 2,549 | 728 22 3 728 25U 3 958 | Soil : Acres | (I) : (2) |
|------------------|------------------|--------------------------------------|-----------------|--|---------------------------------|--------------------------------|
| 2638,935 | 3 3/: 472,046 | 9 : 347,403 4 : 124,643 | 9 2/: 166,889 | 3 : 35,818 8 : 56,785 8 : 74,286 | : Gross | (E) |
| \$ 517,470 | 3 81,021 | 284,276 96,745 | : 136,449 | 33,341 3 .45,659 3 .57,449 | (Production in Dollars | : (4) : Future Without Project |
| 122,038 | 91,025 | 63,127 27,898 | | ZONE A 3,050 1/ 11,126, 16,837 | ollars) | roject |
| 829,274 | 560,383 | 420,141 : 342,88 140,242 : 110,55 | 268,891 | (not subject 82,144 92,473 94,274 | (Produc | (6) Future |
| 670,595 | 453,441 | ٠ | 217,154 | subject to flooding) 144 : 68,820 : 473 : 74,076 : 274 : 74,258 | (Production in Dollars) | Future With Project |
| 158,679 : 36,641 | 106,942 : 15 | 77,255 : 14 29,687 : 1 | 51,737 : 20 | 13,324 : 10 18,397 : 7 20,016 : 3 | Vet | (8) |
| 641 | 15,917 | 14,128 1,789 | 20,724 | 10,274 1/ 7,271 3,179 | Difference in Net Production | (9) |

13

¹⁰¹⁷ Adjusted to eliminate negative net return

Total area zone A reduced by 54 acres urban 20 acres water, and 6,443 acres already drained, not requiring.

drainage or not anticipated to be drained. Total area zone B reduced by 211 acres water and 308 acres woodland not anticipated to be cleared.

| [%[%[F | | | | ₩ | | | | Þ | Zone | (T) | State: |
|--|----------|----------|--------------------------------------|-------------------|----------|--------------------------------------|----------------------------------|-------------------|-------------------|-------------|---------------------------|
| Does not include 10 percent "other" land Included engineering and contingency Amortized over 15 years at 5 percent | TOTAL | Subtotal | 2SU - General crops 2SU - Pasture | 1 - General crops | Subtotal | 2SU - General crops 2SU - Pasture | 2 - General crops 2 - Pasture | 1 - General crops | Soil mapping unit | (2) | Arkansas |
| cent "other" l d contingency at 5 percent | 3,561 1/ | 1,267 1/ | 359 | 881 | 2,294 1/ | 802 60 | 616 | Acres 777 | Area | (3) | ANAL |
| and | 56,520 | 20,881 | 5,386 | 15,244 | 35,639 | 12,031 | 9,242 | 13,444 | llation 2/ | : Total (4) | ANALYSIS OF FARM DRAINAGE |
| - ··· | 5,445 | 2,012 | 519 24 | 1,469 | 3,433 | 1,159 | . 890 35 | 1,295 | lent | : (5) | INAGE SYSTEM COSTS |
| | . 6,412 | 2,386 | 621 | 1,759 | 4,026 | 1,388 13 | 1,666 | 1,551 | :Maintenance | : (6) | OSTS . |
| | 11,857 | 4,398 | 1,140 30 | 3, 228 | 7,459 | 2,547 | 1,956 43 | 2,846 | Annual Cost | : Total | |
| | | | | | | -147 | | | | | 5 5 |

Basin:
Project:
Reach:

St. Francis River Ditch # 1

-147-The second second

Basin:
Projects
Reach:
States

St. Francis River
Ditch # 1
1
Arkansas

TABLE VIII
ANALYSIS OF GROUP DRAINAGE NEEDS AND COSTS

| Item | Unit : | Amount | | Total Cost |
|---|----------------|----------|-----------|------------|
| Excavation 1/ Spreading spoil 1/ Clearing right-of-wey 1/ | : Cubic Yard: | 15,450 | : 0.20 | |
| Right-of-way easements | Acres : | * 3 | 30,00 | 90 |
| Crossings | Each: | 2 | : 200,00 | 400 |
| Swinging water gaps | Each | 3 | ÷ 40,00 | : 120 |
| Pipe drop structures | Each | 1 | : 200,00 | 200 |
| Flap gates | Each | 1 | : 100.00 | 100 |
| Vegetative plantings | Acres | 2 | 8.00 | 16 |
| Total construction cost | : xx : | xx | : : xx | 4,016 |
| Engineering cost Contingencies and legal | : | xx xx | xx xx | 400 |
| Total installation cost | : : | | : | : 4,820 |
| Annual equivalent - installation (amortized for 30 years at | | | | 262 |
| Annual maintenance cost | | | | 201 |
| Annual loss of production - rig | ght-of-way | 2/ | | : 14 |
| Total annual cost of required a | group faciliti | es | | 477 |

These items included in excavation costs under normal contract procedures.

^{2/} Annual loss of production - right-of-way. 1 acre @ \$13.90 per acre.

Basin: St. Francis River
Project: Ditch # 1
Reach: 1
State: Arkansas

TABLE IX SUMMARY OF AN NUAL NET PRODUCTION RETURNS AND ASSOCIATED COSTS

| | (1) | (2) | (3) |
|----|----------------------------|---------|---------------|
| | | | Discounted |
| | Item | Total | Amount |
| | | Dollars | Dollars |
| 1. | Net return with project | 158,679 | xx |
| 2. | Net return without project | 122,038 | x:x |
| 3. | Gross benefit to project | 36,641 | 29,046 2/ |
| | Thur. 3 and 1 and 1 and 1 | | 0/ |
| 4. | Farm drainage cost | XX . | xx <u>2</u> / |
| | a. Installation cost | ,5,445 | xx . |
| | b. Maintenance cost | 6,412 | XX XX |
| | c. Total | 11,857 | 9,399 |
| 5. | Group drainage cost | XX. | xx 3/ |
| | a. Instal lation cost | 262 | XX |
| | b. Maintenance cost 1/ | 215 | XX . |
| | c. Total | 477 | 396 |
| | | | 030 |
| 6. | Conversion cost | xx | xx 4/ |
| | a. Installation cost | | XX |
| | b. Maintenance cost | | |
| | c. Total | | z xx |
| | | | |
| - | | | • |

Includes loss of production, right-of-way

Discounted at 5 percent to account for estimated 10 year lag
to full installation, maintenance, and benefit accrual.

Discounted at 3½ percent to account for estimated 10 year lag
to full installation, maintenance, and benefit accrual.

No conversions, no table VI required.

Basin: St. Francis River
Project: Ditch # 1
Reach: 2
State: Arkansas

TABLE I PRESENT LAND USE

| • • | | • | | £ | | |
|--|--------------------------------|---------|--------------|------------------|------------|-----------|
| | Soil map-: | | Wooded | | :Water | :Total |
| Zone | ping Unit: | (Acres) | (Acres) | : (Acres | :(Acres |):(Acres |
| | | f , | 3 * 1 | 🕻 🦞 • 11 🕸 - 1 1 | the second | Section 1 |
| Zone A | : .1 : | 54 | | : - : | : " | : 54 |
| | 2 | 2,175 | 54 | : - | | : 2,229 |
| | 3 | 4,675 | | | | : 4,773 |
| the second secon | nes — species — to — mes to | | | ne solve i equ | | • 49117 |
| | : 43, | 11: | • | • | | 34 100 |
| | 11. | 1,435 | *** | : | : - : | 4 To 435 |
| Subtotal - all soi | ls . | 8,350 | 152 | : ••, ,, | | : 8,502 |
| Urban | 4,04 | | | | | |
| Water | | i _ | | | | * |
| | • | 0.050 | 350 | • • | | |
| Total - Zone A | • | 8,350 | 152 | - | • · | : 8,502 |
| | : ' | · · | | : | : | • |
| GRAND TOTAL - Reach 2 | | 8,350 | 152 | *** | | : 8,502 |
| 4 | | . \$ | | • | • | |
| | | | | | | · . |

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Basin: St. Francis River Project: Ditch # 1 Reach: State: Arkansas

SUMMARY - TABLE II A ZONE FOR DRAINAGE CALCULATIONS ONLY COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1) Soil | : (2) : Land use and crop | : (3) | | (5) | : (6) |
|-------------|---|--|--|-----------------------------------|---|
| Unit | : distribution | : Acres | : Unit : | Per Acre | : Total |
| All | Corn Soybeans Oats (Grain) Oats (Sup. Past.) Grain Sorghum Perm. Pasture Idle Other 1/ Woodland | 6,915 6,224 2,730 (2,730) 60 1,605 893 (446) 186 459 291 691 152 | Lbs.Lint. Ton Buo Buo Buo Lbs.Beef Lbs.Beef | 258 41 21 25 70 20 | 988,245 889,42 2,460 33,472 22,325 31,220 3,774 78,385 |

Farmsteads, farm roads, waste and non-agricultural
Parenthetical amounts are duplicated acreages
Calculated from Columns 3 and 6; rounded to nearest unit
Total area Zone A reduced by 1,435 acres not requiring drainage

State: Reach: Project: Ditch # 1 Basin: Ste Francis River Arkansas

SUMMARY - TABLE III A

ZONE FOR DRAINAGE CALCULATIONS ONLY

COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION, PRODUCTION COSTS AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT (Based on projected prices)

| | | | | | | | | | | | | | All | | Unit | Soil | 巴 | |
|-------------------|------------|-----------|--------|----------------|-----------------|--------------------|----------------|------------------|---------|--------------|-------------|----------|-------------|------------|------------------|---------------------|--------------|--|
| : TOTAL | : Woodland | : Other 1 | : Idle | : Perm Pasture | : Grain Sorghum | : Oats (Sup.Past.) | : Oats (Grain) | : Soybeans | : Corn | : Cottonseed | : Cotton | : Crops | : Open land | •• | : distribution | : Land use and crop | : (2) | |
| 1,258 5/ | 1 | : 126 | : 5 | 68 | 23 | : (79) | : 159 | 265 | ; | : (564) | : 564 | : 1,132 | : 1,258 | •• | : Acres | 2/ | : (3) | |
| | : Acres | •• | •• | :Lbs.Beef | · Bu. | :Lbs.Beef | : Bu. | : Bu. | : Bu. | : Ton | :Lbs . Lint | •• | •• | •• | : Unit | •• | : (4) | |
| • | •• | | | •• | •• | | | : 23 : | : £3 :: | : .3557 | 395 | | •• | •• | :Per Acre: Total | Production | (5) | |
| •• | •• | | •• | : 15,470 : | 552 : | 7,525 | 4,682 | 6,125 : | 473: | 200,63: | 222,920 : | | | | | , | (6) | |
| | | | | 2005 | 1,53 | .2005 | .90 | 2.30 | 1.45 | 63.00 | -25 | | | Dollars | :Per Unit | Value of p | (7) | |
| , 418°26 | •• | | •• | 3,102 | 248 | 1,509 | : 4,274 | 880,411 | 686 | : 12,640 | : 55,730 | 2 · | •• | : Dollars | : Total | Value of production | : (8) | |
| •• | 40 | •• | •• | : 31.82 | : 21.51 | 8.08 | 19.01 | : 28.41 | 35.99 | •• | : 103,75 | #/ #/ | •• | : Dollars: | Per Acre : | :Cost of production | : (9) | |
| : 72,759 : 20,055 | •• | •• | •• | : 2,164 | 1,95 | : 638 | 3,023 | · 7,530 | 396 | •• | : 58,513 | •• | •• | Dollars | : Total | roduction | (OT) | |
| 20,055 | •• | •• | •• | 938 | 350 | 871 | : 1,191 | 6 6 5 5 8 | : 290 | | · 9,857 | •• | •• | · Dollars | : Return | Net | : (11) | |
| | | | | | | | | . 7 | 52 | | | | | | | | 1 | |

Farmsteads, farm roads, waste and non-agricultural

Parenthetical amounts are duplicated acreages

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent

Total area Zone A reduced by 152 acres woodland not anticipated to be cleared, and 7,092 acres already drained, not requiring or not anticipated to be drained.

152

Basin: St. Francis River
Project: Ditch # 1
Reach: 2
State: Arkansas

SUMMARY - TABLE IV A

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE CALCULATIONS ONLY (Based on projected prices)

| | | | | | | ALL | | (1) Soil Unit |
|-----------------|----------|---------------|-------------------------------|----------|----------------|--------------------|-----------|--|
| TOTAL | Other 1/ | Perm. Pasture | Oats (Grain) Oats (Sup.Past.) | Soybeans | Cottonseed | Open Land Crops | •• | (2) Land use and crop distribution |
| 1,258 5/ | 126 | E 68 | (79) | 266 | (1957) 1057 | 1,132 | | (3) Acres 2/ |
| ' | Acres | Lbs Beef | : Bu. :Lbs.Beef | Bu | : Ton | •• •• | | (4) |
| •• | | | 139 155 | 27 | 4999 | | •• | : (5) : (6) Production :Per Acre: Total |
| •• | •• •• | 21,070 | 11,015: | 7,182: | 281.95 | | •• | (6) |
| | | 2005 | 2000 | 2.30 | 63.00 | ₹ | Dollars | : (7) :Value of p :Per Unit |
| : 127,276 | •• •• | 1,225 | 2,208 | 615°9T | 17,763 | 1 | Dollars | : (8) production : Total |
| •• | •• •• | 42.35 | 12.82 | 31.16 | ore titre | 火厂 | : Dollars | : (9) : (10) :Cost of production :Per Acre : Total |
| 98,938 : 28,338 | 00 00 | 2,880 | 1,013 | 8,288 | 80£ 6T9 | | · Dollars | : (10) production : Total |
| 28,338 | •• •• | 1,345 | 2,067 | 8,231 | C.L.* | •• •• | Dollars | : (11) : Net : Return |
| | | ٠ | • 15 | 3 - | | | | |

Calculated from Columns 3 and 6; rounded to nearest unit Parenthetical amounts are duplicated acreages Farmsteads, farm roads, waste and non-agricultural Total area Zone A reduced by 152 acres woodland not anticipated to be cleared, and Calculated from Columns 3 and 10; rounded to nearest cent 7,092 acres already drained, not requiring or not anticipated to be drained.

Basin: St. Francis River
Project: Ditch # 1
Reach: 2
State: Arkansas

TABLE V REACH SUMMARY BY SOIL MAPPING UNITS

| 1/ Tota | TOTAL | ωN | ** | Unit | Soil | (L) |
|--|----------------|------------------|-----------------------------------|-----------------|-------------------------|--------------|
| l area Zone A | 1,258 <u>I</u> | 850 804 | | * Acres | 7 | : (2) |
| reduced by 15 | # 92,874 | 32,158 | • : " | : Gross | : (Produc | : (3) |
| 2 acres woodla | 72,759 | 25,753 47,006 | | : Cost | (Production in Dollars | (4) : |
| nd not antici | 20,055 | 13,650 | ZONE A | : Net | 8) | : (5) |
| 1/ Total area Zone A reduced by 152 acres woodland not anticipated to be cleared | 127,276 | 52,367 74,909 | ZONE A- (not subject to flooding) | : Gross | : (Producti | : (6) |
| ared | 98,938 | 11,789 57,149 | to flooding) | : Cost | Production in Dollars | (6) : (7) |
| | 28,338 | 10,578 | • | : Net |) in the contraction of | (8) |
| | 8,283 | 4,173 | • | :Net Production | :Difference in | : (9) |

and 7,092 acres already drained, not requiring or not anticipated to be drained.

•

.

State: Reach: Project: Ditch # 1
Reach: 2 Basin: St. Francis River Arkansas

> ANALYSIS OF FARM DRAINAGE SYSTEM COSTS TABLE VII

| | : 4,308 | 2,549 | 1,759 | 18,250 | : 1,132 3/ | : TOTAL | |
|------|-------------------|-------------------------|-------------------------|--|------------|---|------|
| - 1 | 3,113 | 1,914 33 | 1,199 | 824 THI | 719 | : 3 - General crops : 3 - Pasture | |
| 55 - | 1,096 | 597 | 1199 | 5,175 | 345 | : 2 - General crops : 2 - Pasture | A |
| | Dollars | Dollars | Dollars | Dollars | Acres | • •• | |
| | Total Annual Cost | Annual Maintenance Cost | Annual Equivalent 2/ | : Total : Annual : Annual : Cost 1/:Equivalent 2/:Maintenance :Installation :Instal. Cost : Cost | : Area | : :Soil mapping unit and : land use | Zone |

^{1/} Includes engineering and contingency
2/ Amortized at 5 percent over 15 years
3/ Does not include 10 percent "other" land.

Basin: St. Francis River
Project: Ditch # 1
Reach: 2
State: Arkansas

TABLE IX
SUMMARY OF ANNUAL NET PRODUCTION RETURNS
AND ASSOCIATED COSTS

| | | , , | |
|-------------------------|--|---------------------------|--|
| | (1) Item | : (2) Total | (3) Discounted amount |
| | | Dollars | Dollars |
| 2. Ne | t return with project treturn without project oss benefit to project | 28,338 20,055 8,283 | xx xx 6,566 <u>1</u> / |
| 40 Fa ao be co | Maintenance cost | 1,759 2,549 4,308 | xx <u>1</u> / xx xx xx 3,415 |
| 5. Gr a. b. | Maintenance cost | xx | xx 2/ xx xx - |
| 6. Co a. b. c. | Maintenance cost | XX | xx <u>2/</u> xx xx |

^{1/} Discounted at 5 percent to account for estimated 10 year lag to full installation, maintenance, and benefit accrual.

2/ No group drainage, no conversions; no tables VI and VIII required.

Basin:
Project:
State:

St. Francis River
Ditch # 21
Arkansas

TABLE I PRESENT LAND USE

| | :Soil map- | | :Wooded | | Water : Total |
|-----------------|------------|----------|--------------|-----------|------------------|
| Zone | :ping unit | :(Acres) | : (Acres) | :(Acres): | (Acres): (Acres) |
| _ | : | : | : | : | : |
| Zone A | : 1 | : 2,770 | : 49 | : : | - : 2,819 |
| | : 3 | : 4,915 | : 73 | : - : | - : 4,988 |
| | : 4 | : 2,307 | : | : - : | - : 2,307 |
| | : 11 | : 154 | : - | : - : | -: 154 |
| Subtotal-all | soils | : 10,146 | : 122 | : - : | - :10,268 |
| Urban | : | : - | : - | : 260 : | - : 260 |
| Water | | : - | : - | : - : | - : - |
| Total - Zone | A | : 10,146 | : 122 | : 260 : | - :10,528 |
| | : | : | : | : : | : |
| Zone B | : 1 | : 12,598 | : 768 | : - : | - :13,366 |
| | s 3 | : 315 | : - | : - : | - : 315 |
| Subtotal-all | soils | : 12,913 | : 768 | : - : | - :13,681: |
| Urban | | : | : - | : - : | -: - |
| Water | | : - | : - | : - : | 111 : 111 |
| Total - Zone | В | : 12,913 | : 768 | : - : | 111 :13,792 |
| | : | : | : | : : | |
| GRAND TOTAL Pro | ject | : 23,059 | : 890 | : 260 : | 111:24,320 |
| | | : | : | : | |

Basin:

St. Francis River

Project: State:

D: tch # 2.1. Arkansas

SUMMARY - TABLE II A ZOME FOR DRAINAGE CALCULATIONS ONLY COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1) | (2) | 2 | (3) | : (4) | : (5) : | (6) |
|---------|-------------------|------------|---|-----------|------------|--------------|
| Soil : | Land use and crop | 8 | 2/ | 8 | Production | • • |
| Unit : | - | : | Acres | & Unit | Per Acres | Total |
| | | : | | : | : : | |
| . All 8 | Open land | | 9,992 | : | : : | |
| | Crops | | 8,993 | \$ 7. · | : 3/: | |
| . in an | Cotton · | 3 5 | 3,389 | :Lbs.Lint | 322 | 1,090,035 |
| | Cottonseed | 8 100 | (3,389) | ? Ton | : .2895 : | 981.03 |
| 1 | Corn , | | 150 | : Buo; | : 40 : | 6,010 |
| | Rice | | 50 | : . Cwt. | :: 30 : | 1,500 |
| | Soybeans | | 2,554 | : Buo | : 20 : | 51,721 |
| | Oats (Grain) | .8 " | 1,837 | : Bu. | : 23 : | 43,096 |
| - 1 | Oats (Sup.Past.) | | (559) | :Lbs.Beef | 1 70 - 1 | |
| | Grain Sorghum | \$ | | s : Bu. | : 19 : | 1,256 |
| | Perm, Pasture | .\$ | 56,6 | :Lbs.Beef | : 171 :: | 96,630 |
| | Idle | | 382 | 1 1 | | ». I W. |
| | Other 1/ | . 2 | 999 | 1 . | : | |
| | Woodland | | 122 | : Acres | 2 100 | The state of |
| * . | TOTAL | | 10,114 | /: | : : | :.` |
| | | : | = | * | | 1 117 |

Farmsteads, farm roads, waste and non-agricultural
Parenthetical amounts are duplicated acreages.
Calculated from Columns 3 and 6; rounded to nearest unit
Total area zone A reduced by 260 acres urban and 154 acres lands not requiring drainage.

Basin: St. Francis River Project: Ditch # 21
State: Arkansas

SUMMARY - TABLE III A

ZONE FOR DRAINAGE CALCULATIONS ONLY

COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION, PRODUCTION COSTS AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT (Based on projected prices)

| | | - | | - | | - | | | | | | | A11 9 | | Unit | Soil | (1) | |
|--|------------|----------|--------|-----------------|-------------------|--------------|----------|---------|--------------|----------|-----------|-------|--|-------------------|----------------|---|---------|-----|
| TOTAL : | Woodland : | Other 3/ | Idle : | Perm. Pasture : | Oats (Sup. Pest): | Oats (Grain) | Soybeans | Corn | Cottonseed * | | Cotton | Crops | Open land | •• | distribution : | Land use and crop : | (2) | |
| 1,789 7/ | | 179 | 35 | 233 | (126) | 178 | 104 | 37 | (1,023) | 1 | 1,023 | 1,610 | 1,789 | | Acres | 2/ | (3) | |
| | * Acres | •• | •• | :Lbs.Beef | *Lbs.Beef | : Bu. | : Bu. | : Bu. | * Ton | •• | *Lbs.Lint | •• | ** | •• | * Unit | •• | : (4) | |
| • •• •• | •• | | | 8 · 221 | 105 | : 27 | 20 | • 44 | . 3242 | •• | 360 | 3/ | ** ** ** ** ** ** ** ** ** ** ** ** ** | •• | . Per Acre : | Production. | : (5) | |
| | | | | 51,595 | 13,230 | 4,862 | 2,050 | 1,627 | 331.64 | | 368,495 | | | | Total . | | (6) | |
| | | • | | 2005 | 2005 | . 90 | 2.30 | 1.45 | 63.00 | | -25 | | •• | Dollars | Per Unit : | : Value of production : Cost of production: Net | : (7) : | |
| 137,464 | | | | 10,344 | 2,653 | 4,376 | 4,715 | 2,359 | 20,893 | | 92,124 | ٠, | | Dollars | Total | roduction | (8) | 400 |
| 19 pp 00 j | | •• | •• | 30.97 | : 9,13 : | : 18,10: | 25.66 : | : 36.86 | •• | •• | 97.21 | 4/ | 90' | :Dollars :Dollars | Per Acres | :Cost of p | : (9): | |
| 115,066 | 00 | | | 7,215 : | 1,150 : | 3,222 : | 2,669 : | 1,364 : | | •• | 99,446 8 | | •• | Dollars : | Total | roduction: | (10): | 1 |
| 22, 398 <u>5</u> / 22, 818 <u>6</u> / | | | | 3,129 | 1,503 | 1,154 | 2,046 9 | .995 | Lo | 13,991 7 | 13,571 5/ | • | | Dollars | Return | Net · · · | (11) | |

Farmsteads, farm roads, waste and non-agricultural

Parenthetical amounts are duplicated acreages.

Calculated from Columns 3 and 6; rounded to me arest unit

Calculated from Columns 3 and 10) rounded to nearest cent Includes calculated negative net return

Adjusted to eliminate negative net return

Total area zone A reduced by 260 acres urban, 122 acres woodland not anticipated to be cleared, and 8,357 acres already drained, not needing drainage or not anticipated to be drained.

State: Project Basin: St. Francis River Ditch # Arkansas

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE CALCULATIONS ONLY (Based on projected prices) TABLE IV A

| -/ 4 | | All | (1) Soil Unit |
|--------------------------------|--|--|--|
| Other 1/ sWoodland TOTAL | cottonseed Corn Soybeans Oats (Grain) Oats (Sup.Past.) Perm. Pasture | • Open land • Crops • Cotton | : (2) : Land use and crop : distribution |
| 179 | (1,023) 37 104 178 (178) 233 | 1,789 1,610 | (3) 2/ Acres |
| Acres | Bu. Bu. Bu. Bu. Bu. Bu. Bu. Bu. Beef | Lbs.Lint | (4) |
| | | 516 | ; (5); Production ;Per Acres |
| * | 474.83 2,204 2,636 7,770 22,405 72,885 | 527 585 | (6) · Total |
| 00 00 00 00 00 | 1.45 2.30 2.30 2.005 | Dollars | : (7) :Value of :Per Unit |
| 197,168 | 29,914 3,196 6,063 6,993 14,493 | 131,896 | : (7) : (8) :Value of production :Per Unit : Total |
| ••••••• | 51.19 30.04 26.57 11.37 | ************************************** | |
| 158,730 38,438 | 80 60. 66 60 60 60 | or • • • • • • • • • • • • • • • • • • • | : (9) : (10) : (Cost of production; Net For Acres Total : Ret |
| 38,438 | 2 2 3 3 0 2 2 3 3 9 3 9 3 9 3 9 3 9 3 9 3 9 3 9 3 | Dollars 24 805 | Net Return |

Parenthetical amounts are duplicated acreages. Farmsteads, farm roads, waste and non-agricultural

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent

Total area zone A reduced by 260 acres urban, 122 acres woodland not to be cleared, and 8,357 acres lands already drained, not requiring drainage or not anticipated to be drained,

St. Francis River Basin: Ditch # 21 Project: State: Arkansas

TABLE II B 1/ ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1) Soil Unit | : (2) : Land use and crop : : distribution : | (3) 3/ Acres | : (4) : (5) : (6) Production Unit :Per Acre: Total |
|---------------------|--|---------------------------|--|
| 1 | Open land Crops Cotton Cottonseed Soybeans Oats (Grain) Perm. Pasture Idle Other 2/ Woodland TOTAL | (4,300) 3,370 2,673 | Lbs.Lint: 215 924,500 Ton 1935 832.05 Bu. 14 47,180 Bu. 16 42,768 Lbs.Beef: 145 50,605 |

One soil only; no summary required
Farmsteads, farm roads, waste and non-agricultural
Parenthetical amounts are duplicated acreages.
1.62 percent cropland drained.
Total area zone B reduced by lll acres water.

State: Profeats Basin: St. Francis River Arkansas Ditch # 21

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS (Based on projected prices) TABLE III B 1/

| * TOTAL | • 0t | * Perm | : Oa | * 0a | s So | * Co | * Co | : Crops | 1 :Open | •• | Unit : di | Soil: Lan | (1) : |
|---|----------|---------------|------------------------|--------------|--------------|------------|-------------|----------|-----------|-----------------------------|------------------|---|----------|
| TOTAL | Other 2/ | Perm. Pasture | Oats (Sup.Past.) | Oats (Grain) | Soybeans | Cottonseed | Cotton | ps | Open land | | distribution | Land use and crop | (2) |
| 13,489 6/ | 1,349 | 1,821 | : (1,214) | 2,428 | * 728 | : (6,677) | : 6,677 | : 12,140 | : 13,489 | •• | : Acres | 3 | : (3) |
| Acres | •• • | Lbs_Beef | :Lbs.Beef | * Bu. | * Bu. | : Ton | :Lbs.Lint | •• | •• | •• | * Unit | •• | : (4) |
| 2 | 80 0 | 255 | 5 55 . * | : 34 : | 21. * | | : 430 5/: | * 4 * | •• | •• | :Per Acre: | Production | : (5): |
| 98 90 | | . 464,355 | 66,770 : | 82,552 | 15,288 : | 2,584,00 : | 2,871,110 : | •• | | | Total : | •• | (6) |
| | | 2005 | .2005 : | .90 : | 2.30 : | 63,00 : | . 25 : | •• | •• | : Dollars : | Per Unit : Total | Value of p | (7): |
| 1,096,518 | | 93,103 | 13,387 | 74,297 | 35,162 | 162,792 : | 717,777 | | | :Dollars | | roduction a | (8) |
| • | | 35.63 : | 3.75 : | 21.16: | 26,98 : | ** | 113,52 : | •• | 00 | Dollars : Dollars : Dollars | Per Acres | : Value of production : Cost of production: Net | : (9) : |
| 898,424: 198,094 | | 64,882: | 4,552 : | 51,376 : | 19,641: | •• | 757,973 : | •• | •• | Dollars : | Total : Return | oduction: | : (10) : |
| 198,094 | | 28,221 | 8,8356 | 22,921 | 15,521 | | 122,596 | | | Dollars | Return | Net | : (11) |

One soil only; no summary required

Parenthetical amounts are duplicated acreages. Farmsteads, farm roads, waste and non-agricultural

76.55 percent cropland drained.

10 percent cotton on drained land irrigated

Total area zone B reduced by 111 acres watered and 192 acres woodland not anticipated to be cleared.

Basin: St. Francis River
Project: Ditch # 21
State: Arkansas

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAI NAGE AND FLOOD CONTROL CALCULATIONS (Based on projected prices)

| 11 | | | | | | | • | | | | | | ۳, | | Unit | Soil | (I) |
|------------------------------------|-----|--------------------|-----------|------------|-------------------------|---------------|--------------------|----------------------|----------|---------------|------------------|------------|-------------|-----------|----------------|---|-----------------------|
| One soil only: no summery required | | 1 TOTAL | :Woodland | to Other 2 | s Idle | Perm. Pasture | : Oats (Sup.Past.) | ats (Grain) | Soybeans | * Cottonseed | * Cotton | : Crops | * Open Land | •• | * distribution | : Land use and crop | : (2) |
| ummery requir | 00 | : 13,489 6/ : | 1. | : 1,349 : | \$ 486 \$ | 1 1,821 : | : (1,214) : | 2,428 : | 728 : | : (6,677) · : | •• | : 12,140 : | : 13,489 : | 00 | Acres : | 3/ : | s (3) s |
| ed | : | | Acres | | | :Lbs.Beef | Lbs.Beef | Bu. | Bu. | Ton | Lbs.Lint | | | | Unit | | (4) |
| | •• | | •• | | •• | 285 | : 70 : | : 39 : | 23 | : 4500 : | : 500 5/: | : 4/ : | •• | •• | :Per Acres | Production | : (5) : |
| | ••• | ••• | • | •• | | 518,985. | 84,980: | 94,692 | 16,744: | 3,004,65: | 3,338,500 : | • | | •• | Total : | •• | (6) |
| | •• | | •• | •• | • | 2005 : | 2005 : | • 90 • | 2,30: | 63,00 : | . 25 . | •• | •• | Dollars : | Per Unit: | : Value of production : Cost of production: | (7) : |
| | •• | 1,268,746: | •• | • | •• | 104,056: | 17,038: | 85,223: | 38,511: | 189,293: | 834,625: | •• | •• | Dollars : | Total :1 | oduction so | (8): |
| | •• | **1 | •• | • | •• | 39.32 : | 5.37: | 23.75 : | 28.27: | •• | 133.63 : | •• | | Dollars: | Per Acres | ost of pr | (9): |
| | •• | 1,048,615: 220,131 | | •• | •• | 71,602: | 6,519; | 57,665: | 20,581: | •• | 892,248: 131,670 | •• | •• | Dollars: | Total : | oduction: | (10) |
| | | 220,131 | -1 | 63 | | 32,454 | 10,519 | 27,558 | 17,930 | | 131,670 | | | Dollers | Return | Net | (11) |

Farmstbads, farm roads, waste and non-agricultural Parenthetical amounts are duplicated acreages

[किकिमिलिकि

98.83 percent cropland drained land irrigated

Total area zone B reduced by 111 acres watered and 192 acres woodland not anticipated to be cleared.

State: Project:

Basin:

Arkansas

St. Francis River

PROJECT AREA SUMMARY BY SOIL MAPPING UNITS TABLE

| TOTAL: | Subtotal: | , _m | Subtotal: | · | ω • | pd | -Unit : | Soil : | | (1) : |
|------------------------------|--------------|-----------------------|--|---------|---------------|--|------------------|-------------------------|------------------------|-------|
| 15,278 | 13,489 2/ | 13,489 | 1,789 1 | 329 | 934 | 526 | Aores | | | (2) |
| | • • • | • •• | | • •• | •• | 700 , | | •• | •• | |
| 1,233,982;1,013,490 | 1,096,518 | 1,096,518: | 137,464: | 31,371: | 82,135; | 23,958; | Gross : | (Produ | Future | (3): |
| ,013,490 | 898,424 | 898,424 | 115,066 | 25,202 | 66,919 | 22,945 | Cost | (Production in Dollars | Future Without Project | (4) |
| 220,912 | : 198,094 | 198,094 | \$ 22,818 | : 6,169 | 15,216 | 2 1.433 3/ | : Net | ollars) | roject | : (5) |
| | 60 00 | • • | a •• • | • •• | •• | * A | •• | •• | •• | - |
| 1,465,914 | 1,268,746 | 1,268,746 : 1,048,615 | 197,168 | 45,155 | 101,276 | - (not subject to flooding 50,737 : 40,918 : | Gross | (Produc | Futur | (6) |
| 1,2 | 1,0 | 1,0 | ֓֞֜֜֜֜֜֜֓֓֓֓֓֓֓֓֓֓֜֜֜֜֜֓֓֓֓֓֓֓֓֡֓֜֜֜֜֓֓֓֡֓֡֓֡֓֡֓֡֓֡֓֡֓֡֓֡֡֡֡֓֡֓֡֡֜֜֜֡֡֡֓֜֜֡֡֡֡֡֡ | • •• | •• | ect t | | tion | e Wit | |
| 1,207,345 : 258,569 : 37,657 | 1,048,615 |)48,615 | 158,730 | 35,869 | 81,943 | 40.918 | Cost | (Production in Dollars) | Future With Project | (7) |
| 258 | : 220 | \$ 220 | 3 | • • | | | 1 | rs) | ä | |
| 3,569 | 220,131 | 220,131 | 38,438 | 9,286 | 19,333 | 9.819 | Net | | | (8) |
| 37,657 | 22,037 | : 22,037 | 15,620 | 3,117 | 4,117 | 8.386 3/ | : Net Production | : Difference in | | (9) |
| | . | 164- | 1 | | | 1 | ä | | | |

Adjusted to eliminate negative net return Total area zone B reduced by 111 acres watered and 192 acres woodland not anticipated to be cleared. Total area zone A reduced by 260 acres urban, 122 acres woodland not anticipated to be cleared, and 8,357 acres already drained, not requiring drainage or not anticipated to be drained.

Basin:
Project:
Ditch # 21
State:
Arkansas

ANALYSIS OF FARM DRAINAGE SYSTEM COSTS

| | | æ | | | | A | Zone | (1) |
|-----------------------|--|--|---|--------------------------------|-------------------------------|---|--|-------------------|
| TOTAL | : Subtotal | : 1 - General crops : 1 - Pasture | * Subtotal | 4 - General crops 4 - Pasture | 3 - General crops 3 - Pasture | : 1 - General crops : 1 - Pasture | *Soil mapping unit and land use | (2) |
| 4,315 1 | 2,705 1/ | 2,299 | 1,610 1/ | 260 36 | 715 | Acres 402 71 | Area | (3) |
| 68,470 | 43,559 | 39,780 3,779 | 24,911 | 3,458 | 12,372 | 1 Dollars 1 6,956 1 661 | :Cost :Installation 2/ | : (4) |
| \$ 6 ₃ 596 | 4,196 | 3,832 | 2,400 | 333 | 1,192 | Dollars 670 64 | lent Cost 3/ | : (5) |
| 7,894 | 4,677 | 4,590 87 | 3,217 | 399 | 1,903 | Dollars 803 15 | Maintenance Cost | (6) |
| 14,490 | 8,873 | 8,422 | 5,617 | 732 | 3,095 | Dollars 1,473 79 | Annual scost | ; Total |
| | 4,315 <u>1</u> /: 68,470 : 6,596 : 7,894 : | : 2,705 1/: 43,559 : 4,196 : 4,677 : : 4,315 1/: 68,470 : 6,596 : 7,894 : | 1 - General crops 2,299 39,780 3,832 4,590 1 1 - Pasture 406 3,779 1 364 87 1 87 1 Subtotal 2,705 1/1 43,559 1 4,196 1 4,677 1 4,315 1/1 68,470 1 6,596 1 7,894 1 | # Subtotal # 1,610 1/ : 24,911 | ### 4 - General crops | 3 - General crops : 715 : 12,372 : 1,192 : 1,903 : 3,0 3 - Pasture : 126 : 1,172 : 113 : 90 : 2 4 - General crops : 260 : 3,458 : 333 : 399 : 7 4 - Pasture : 1,610 1/ : 24,911 : 2,400 : 3,217 : 5,6 1 - General crops : 2,299 : 39,780 : 3,832 : 4,590 : 8,4 1 - Pasture : 2,705 1/ : 43,559 : 4,196 : 4,677 : 8,8 1 - TOTAL : 4,315 1/ : 68,470 : 6,596 : 7,894 : 14,4 | 1 - General crops Acres Dollars Collars Acres Acre | Soil mapping unit |

-165_

Basin: Project: State:

St. Francis River
Ditch # 21
Arkansas

TABLE VIII
ANALYSIS OF GROUP DRAINAGE NEEDS AND COSTS

| | : : | | : Unit : | Total | | | | |
|--|---------------------------------------|----------|--------------|------------------|--|--|--|--|
| Item | : Unit : | Amount | | Cost | | | | |
| Excavation 1/ Spreading spoil 1/ Clearing right-of-way 1/ | : : : : : : : : : : : : : : : : : : : | 20,000 | : Dollars: | Dollars 4,000 | | | | |
| Right-of-way easements | : - : | | : : | • | | | | |
| Crossings | Each | 4 | 200.00: | 800 | | | | |
| Swinging water gaps | Each | 4 | 40,00: | 160 | | | | |
| Pipe drop structures | : Each | 3 | 200.00: | 600 | | | | |
| Flap gates | • | • | : -: | • | | | | |
| Vetetative plantings | Acres | 30 | : 8.00: : | 240 | | | | |
| | • | | | | | | | |
| Total construction cost | : | XX | : | 5,800 | | | | |
| Engineering cost | xx, | XX | : XX : | 580 | | | | |
| Contingencies and legal | xx | XX | xx: | 580 | | | | |
| | | | | | | | | |
| Total installation cost | | | : | 6,960 | | | | |
| Annual equivalent - installatio (amortized for 30 years at | | " ·· | : | 378 | | | | |
| Annual maintenance cost | 290 | | | | | | | |
| Annual loss of production - rig | ht-of-way | | | - | | | | |
| Total annual cost of required group facilities : 66 | | | | | | | | |

^{1/} These items included in excavation costs under normal contract procedures.

Basin: Project: St. Francis River Ditch # 21

State:

Arkansas

TABLE IX SUMMARY OF AN NUAL MET PRODUCTION RETURNS AND ASSOCIATED COSTS

| (1) | (2) | : (3) : Discounted |
|-------------------------------|---------|--|
| Item | Total | : Amount |
| | Dollars | Dollars |
| 1. Net return with project | 258,569 | : xx |
| 2. Net return without project | 220,912 | : xx |
| 3. Gross benefit to project | 37,657 | 29,851 <u>2/</u> |
| 4. Farm drainage cost | : xx | : xx 2/ |
| a. Installation cost | 6,596 | : XX |
| b. Maintenance cost | 7,894 | : xx |
| c. Total | 14,490 | : 11,486 |
| 5. Group drainage cost | xx | xx 3/ |
| a. Installation cost | : 378 | : XX |
| b. Maintenance cost 1/ | 290 | * XX |
| c. Total | 668 | \$ 555 |
| 6. Conversion cost | | : • 1/ |
| a. Installation cost | xx | $\begin{array}{cccc} & & \times \times & 4/\\ & & \times \times & \end{array}$ |
| b. Maintenance cost | | · XX |
| c. Total | | * ** |
| | | |

Includes loss of production, right-of-way

Discounted at 5 percent to account for estimated 10 year lag to full installation, maintenance, and benefit accrual.

^{3/} Discounted at $3\frac{1}{2}$ percent to account for estimated 10 year lag to full installation, maintenance, and benefit accrual. No conversions; no table VI required

Basin: St. Francis River
Project; Rivervale Culvert Relief Ditch
State: Arkansas

TABLE I
RESENT LAND USE

3 - .. - 4

| Zone . | :Soil map-: :Ping Unit: | (Acres) | :Wooded :Urban :(Acres) :(Acres | | : Total :(Acres) |
|------------------------------------|-------------------------|---------------|------------------------------------|---------|--------------------------|
| Zone A | 2SU : 3 : 4SU : | 290 11,856 | | : | : 290 :11,856 : 14 |
| Subtotal - all Urban Watered | soils : | 12,160 | | | :12,160 |
| GRAND TOTAL - Pro | ject | 12,160 | : - : - : : | \$ 17 m | :12,160 |

St. Francis River

Project:

Rivervale Culvert Relief

State:

Arkansas

TABLE II A

ZONE FOR DRAINAGE CALCULATIONS ONLY COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (l) : Soil : | (2) : Land use and crop | (3) | : (4) | : (5): Production | |
|-----------------|--|--|--|---|---|
| Unit : | distribution | Acres | : Unit | :Per Acre: | Total |
| 3 | Open land Crops Cotton Cottonseed Soybeans Oats (Grain) Oats (Sup. Past.) Perm. Pasture Idle Other 2/ Woodland TOTAL | 12,085 10,877 6,853 (6,853) 1,523 1,958 (489) 326 217 1,208 | Lbs.Lint Ton Bu. Bu. Lbs.Beef Lbs.Beef | : •3240 : : 20 : : 25 : : 70 : | 2,467,080 2,220.37 30,460 48,950 34,230 58,680 |

One soil only; no summary required
Farmsteads, farm roads, waste and non-agricultural
Parenthetical amounts are duplicated acreages.
Total area zone A reduced by 75 acres already drained.

Basin: St. Francis River
Project: Rivervale Culvert Relief
State: Arkansas

TABLE III A 1/
ZONE FOR DRAINAGE CALCULATIONS ONLY

COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION, PRODUCTION

COSTS AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT

(Based on projected prices)

| 1) One soil only: | : TOTAL | | : Other 2/ | : Idle | : Perm. Pasture | : Grain Sorghum | : Oats (Sup.Past. | : Oats (Grain) | * Soybeans | s Cottonseed | : Cotton | : Crops | 3 : Open land | •• | Unit : distribution | Soil : Land use and crop | (1) : (2) |
|-------------------|--------------------|---------|------------|--------|-----------------|-----------------|-------------------|-----------------|------------------|------------------|--------------------|-----------|---------------|----------------------------|---------------------------|---|--------------|
| | 4,109 4/: | * Acres | • 411 | | | : 148 : Bu. |): (139): | : 555 : Bu. | 555 :: Bu. | : (2,219) : fon | : 2,219 :Lbs.Lint | : 3,698 : | : 4,109 :: | | * Acres : Unit | 3/ 3/ | : (3) : (4) |
| • | - | | •• | ••• | 255 * | . 24 . | 105 | | 222 | : .3645 : | * * * 405. · · · | •• | ** | •• | :Per Acre: | Production | : (5): |
| 01 | | | | | 8,305 : 2005 : | 3,552 . 1.53 : | 14,595 : .2005 : | 00 | •• | 808.83 : 63.00 : | 898,695 : 25 : | •• | •• | : Dollars : | Total : Per Unit : | *Value of p | (6) : (7) : |
| • | 332,734 : | •• | •• | •• | 5,675 : | •• | 2,926 : | 14,985: | 28,083 : | 50,956 : | 224,674 : 1 | •• | •• | Dollars : Do | Total :Per | roduction : Cos | (8) : (|
| | : 269,523 : 63,211 | •• | •• | *** | 3,955 : | 3,183: | 1,269 : | 19.28: 10,700 : | 27.63: 15,335: 1 | •• | 105.94: 235,081: 4 | •• | ** | Dollars: Dollars : Dollars | :Per Acre: Total : Return | : Value of production : Cost of production: Net | (9) : (10) : |
| | 63,211 | | | | 1,720 | 2,252 | 1,657 | 4, 285 | 12,748 | • | 40,549 | | | Dollars | Return | Net | (II) |

One soil only; no summary required

Farmsteads, farm roads, waste and non-agricultural Parenthetical amounts are duplicated acreages.

Total area zone A reduced by 8,051 acres already drained or not anticipated to be drained.

State: Project: Basin*

Rivervale Culvert Relief St. Francis River Arkansas

TABLE IV A 1/ZONE FOR DRAINAGE CALCULATIONS ONLY

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION

(Based on projected prices)

| 1/ One soil only; no | | * TOTAL | | t Other 2/ | : Idle | Perm. Pasture | s Grain Sorghum | * Oats (Sup.Past.) | * Oats (Grain) | : Soybeans | * Cottonseed | * Cotton | * Crops | 3 : Open land | •• | Unit: distribution | Soil: Land use and crop | (1): (2) |
|----------------------|----|-----------------|---------|------------|--------|---------------|-----------------|--------------------|----------------|------------|--------------|-----------------|---------|---------------|-------------------|--------------------|---|----------|
| no summery required | 1 | 4,109 4/ | | 411 | 110 | 111 | 148 | (139) | 555 | 555 | (2,219) | 2,219 | 3,698 | 4,109 | | Acres | 3 | (3) |
| quired | • | 3/ | a Acres | •• | •• | :Lbs.Beef | : Bu. | :Lbs.Beef | Bu. | Bu. | * Ton | *Lbs.Lint | •• | •• | •• | : Unit | •• | : (4) |
| | •• | •• | •• | •• | •• | \$ 305 \$ | 24 * | t 145 : | 8 44 : | s 27 s | * .4455 * | : 495 : | •• | •• | •• | :Per Acre: | Production | : (5) : |
| | 1 | | | | | 33,855 | 3,552 | 20,155 | 24,420 | 14,985 | 988.56 | 1,098,405 | | | | Total | | (6) |
| | •• | •• | •• | •• | •• | 2005 | 1.53 | . 2005: | .90 | 2.30 | £ 63.00s | .25: | •• | •• | Dollars | :Per Unit : | : Value of production : Cost of production: | : (7) |
| | * | 409,587 | | • | • | 6,788 | 5,435 | 4,041 | 21,978 | 34,465 | 62,279 | 274,601 | • | | :Dollars | Total | production | (8) |
| | •• | • | ** | ·· | •• | : 41.76: | : 21.51: | 13,42 | : 26.75: | : 31.16: | •• | 129,27 | •• | •• | :Dollars : | :Per Acre: | Cost of pr | : (9) : |
| | •• | 328,673 ,80,914 | •• | •• | •• | 4,635 : | 3,183 ; | 1,865 ; | 14,846 ; | 17,294 :1 | •• | 286,850 ,50,030 | •• | •• | Dollars : Dollars | Total : | oduction: | : (10) : |
| | | 30,914 | 7 | | | 2,153 | 2,252 | | 7,132 | 17,171 | | 50,030 | | | Dollars | Return | Net | (II) |

Farmsteads, farm roads, waste and non-agricultural

Parenthetical amounts are duplicated acreages. Total area zone A reduced by 8,051 acres already drained or not anticipated to be drained,

| 以. | TOTAL | ų, | Unit | Soil | 5.4 | 1 | 4. | in the same | |
|--|-------------------|-----------------------------------|----------------|-------------------------|---------------------|------------|---|--|--|
| 1/ Total area zone A reduced by 8,051 acres already drained or not | •• •• •• | a 4,109 | a Acres | •• ; | | (2) | | The second secon | The same of the sa |
| one A reduce | 4,109 1/: 332,734 | •• | : Gross | •• | •• (| : (3 | | | |
| ed by 8,051 | ** ** ** | 332,734 : 269 | oss : Cost | (Production | | 3 (4) | | | |
| acres alread | 269,523 | 269,523 : 6 | | Production in Dollars | t Project | | | | |
| y drained or | 63,211 | 3,211 A - | Net: : |) :: | | (5) | | 4 | |
| | 409,587 | (not subject | Gross : | (Produc | Future | (6) | | | |
| anticipated to be drained. | 328,673 | subject to flooding 587 : 328,673 | Cost | (Production in Dollars) | Future With Project | (7) | approximately being a comment of the con- | | |
| rained | 00 00 .00 | 80,914 | : Net | ars) | c | (8) | a the sept make | | |
| | 80,914 : 17,703 | 17,703 | Net Production | Difference in | | (9) | A report control | | |
| | -172 | 2- | 18 | Ħ | | 7 7 7 7 7 | .4. | | |

Project:

St. Francis River Rivervale Culvert Relief

PROJECT AREA SUMMARY BY SOIL MAPPING UNITS

TABLE V

Basin: St. Francis River Project: Rivervale Culvert Relief State: Arkansas

TABLE VII
ANALYSIS OF FARM DRAINAGE SYSTEM COSTS

| † ; | A | | Zone | | (1) |
|-----------------------|--------------------------------------|------------|-------------------------|-----------------------|-------|
| * TOTAL | : 3 - General crops : 3 - Pasture | • | and land use | Soil manning unit | : (2) |
| •• ² •• •• | ** ,** | 0.0 | •• | •• •• | •• |
| 3,698 1/: | 3,587 | Acres | Area | | (3) |
| | · | | *** | | •• |
| | | · D | Insta | Cost | |
| 63,099 | 62,066 | · Dollars | llation | tt taley | (4) |
| 099 | 033 | | on 2/ | | |
| | • • | •• | Installation 2/ : Instl | * Annua | •• |
| 6,079 | 5,979 | Dolla | l. Cost | *Annual *Four valent | . (5 |
| Ø | 0 0 | rs | st 3 | et |) |
| •• •• •• | | •• | t 3/ aCost | : Am | ** |
| 9, | 9,549. 79 | Dollar: | st | Maintenance | 9) |
| 9,628 | 549 79 | lars | | an ce | |
| on 60° 90 | | 2 Do | *Cost | : Total | ** |
| 15,707 | 15,528 179 | Dollars | ct | a Annual | |
| 7 | ω ω | J 2 | | | 7) |
| | -17 | 2 | | | |

3 Inc

Does not include 10 percent "other" land Includes engineering and contingency Amortized over 15 years at 5 percent

-Basin: State:

St. Francis River Project: Rivervale Culvert Relief

Arkansas

TABLE VIII ANALYSIS OF GROUP DRAINAGE NEEDS AND COSTS

| Item | Unit: | Amount | : Unit : Cost | : Total : Cost |
|---|----------------|--------|----------------------------|-------------------|
| Excavation 1/ Spreading spoil 1/ | : : | | : | : |
| Clearing right-of-way 1/ | Cubic Yards | 5,100 | : 0.20 | : 1,020 |
| Right-of-way easements | : Acres : | 3 | 30.00 | : 90 |
| Crossings | Each | ; 1 | : : 300 _• 00 | : 300 |
| Swinging water gaps | Each | ; 1 | ± 40.00 | : 40 |
| Pipe drop structures | - : | : ••• | : - | : : – |
| lap gates | - | - | • ; • • • • | : : – |
| Vegetative plantings | Acres | 1 | : 8 _• 00 | : 8 : |
| Total construction cost | : xx : | xx | : : xx | :1,458 |
| Engineering cost | xx : | хх | : xx | : 146 |
| Contingencies and legal | i xx i | xx | : xx : | : : 146 : |
| Total installation cost | | | | :1,750 |
| Annual equivalent - installati (amortized for 30 years a | on cost | i i | ; • | ; ! |
| | percent) | : | | 95 |
| innual maintenance cost | | • | | 73 |
| nnual loss of production - ri | | 2/ | | 15 |
| otal annual cost of required | group faciliti | es | 3 | 183 |
| 1/ These items included in - | | | : | |

These items included in excavation costs under normal contract procedures.

Annual loss of production - right-of-way. 1 acre @ \$15.38 per acre.

Basin: St. Francis River
Project: Rivervale Culvert Relief
State: Arkansas

TABLE IX

SUMMARY OF ANNUAL NET PRODUCTION RETURNS
AND ASSOCIATED COSTS

| | (1) Item | | (3) Discounted Amount Dollars |
|----|---|-----------------------------------|----------------------------------|
| 2. | Net return with project Net return without project Gross benefit to project | 80,914 63,211 17,703 | xx xx 14,033 <u>2</u> / |
| 1 | Farm drainage cost a. Installation cost b. Maintenance cost c. Total | 0,079 6,079 9,628 15,707 | xx 2/ xx xx 12,451 |
| 1 | Group drainage cost a. Installation cost b. Maintenance cost 1/ c. Total | 95 88 183 | xx <u>3</u> / xx xx 152 |
| 1 | Conversion cost a. Installation cost b. Maintenance cost c. Total | xx - - | xx <u>4</u> / xx xx - |

^{1/} Includes loss of production, right-of-way

Discounted at 5 percent to account for estimated 10 year lag to full installation, maintenance, and benefit accrual.

4/ No conversions; no table VI required.

^{3/} Discounted at $3\frac{1}{2}$ percent to account for estimated 10 year lag to full installation, maintenance, and benefit accrual.

Basin:
Project:
Reach:
State:

St. Francis River
Buffalo Ditch

Arkansas

TABLE I RESENT LAND USE

Additional to the second section

| | Soil map | Onen | Monded | Ilrhan . | Water | Total |
|------------------|------------|------------------------------|------------------|--|--|-----------|
| | ping unit | | | | | |
| 30110 | bring and | (1101 03) | (2101 00) | (1101 05): | (210100) | (1101 00) |
| Zone A | -, 4 | 4,040 | 36 | | 167 | 4.076 |
| | | 1,882 | | | - 1 | |
| | | 25,198 | | | | |
| | | 1,873 | | | | |
| Subtotal - all | | 32,993 | | | | |
| Urban | • | | | 151 | | 151 |
| Water 4 | | - | | | | 5 |
| Total - Zone | *44 | 32,993 | | • | | 33,274 |
| | T | | 7.5 | | 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1 | |
| Zone B | 1 | 2,693 | t and the second | | | 2.693 |
| State and | | 997 | | | .* 10 5 ● | |
| | 4 | | | | | |
| | 11 | | | - : | | 257 |
| | 12 | | | - 1 | -1. | 3.086 |
| Subtotal - all | soils : | 24,827 | 1,766 | | - | |
| Urban | | | - : | | - | |
| Water | , | | : : | - : | 249 | 249 |
| Total - Zone I | B . | 24,827 | 1,766 | - : | 249 | 26,842 |
| * | | 2 | : | | , = ; | |
| GRAND TOTAL - Re | each 1 | 57,820 | 1,891 | 151 : | 254 | 60,116 |
| 7' 20 75 | m' e e e e | the ata's arrounded sprints. | 1 1 100 1 | * ************************************ | the state of | , |
| | | | | | | |

grand with the first transfer of transfe

The state of the s

Basin: St. Francis River
Project: Buffalo Ditch
Reach: 1
State: Arkansas

SUMMARY - TABLE II A

ZONE FOR DRAINAGE CALCULATIONS ONLY

COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (2) | (3) | : (4) | : (5) : | (6) |
|----------------------|--|--|---|--|
| distribution | Acres | Unit | :Per Acre: | Total |
| | : | : | : : | |
| 1 1 | | ** 1 1 | : | |
| | • | • | : 3/: | |
| | | :Lbs.Lint | : 354 : | 785,470 |
| Cottonseed | (2,219) | : Ton : | : .3186 : | 706.92 |
| Corn | 215 | : Bu. | : 32 : | 6,825 |
| Soybeans | 1,457 | : Bu. | : 21 : | 30,001 |
| | 437 | : Bu. | : 28 : | 12,051 |
| Oats (Sup.Past.) | (70) | :Lbs.Beef | : 70 : | 4,900 |
| Grain Sorghum | 140 | : Bu. | : 20 : | 2,800 |
| Perm. Pasture | 279 | :Lbs.Beef | : 180 : | 50,220 |
| Idle | 323 | \$ | : : | |
| Other 1/ | 563 563 | * | : | |
| Woodland To make the | 36 | : Acres | : : | |
| TOTAL | 5,669 4/ | : | : : | |
| | | • | : : | |
| | Land use and crop distribution Open land Crops Cotton Cottonseed Corn Soybeans Oats (Grain) Oats (Sup.Past.) Grain Sorghum Perm. Pasture Idle Other 1/ Woodland | Land use and crop distribution 2/ Open land 5,633 Crops 5,070 Cotton 2,219 Cottonseed (2,219) Corn 215 Soybeans 1,457 Oats (Grain) 437 Oats (Sup.Past.) (70) Grain Sorghum 140 Perm. Pasture 279 Idle 323 Other 1/ Woodland 36 | Land use and crop distribution 2/ Open land 5,633 Crops 5,070 Cotton 2,219 Lbs.Lint Cottonseed (2,219) Ton Corn 215 Bu. Soybeans 1,457 Bu. Oats (Grain) 437 Bu. Oats (Sup.Past.) (70) Lbs.Beef Grain Sorghum 140 Bu. Perm. Pasture 279 Lbs.Beef Idle 323 100 Other 1/ 563 Woodland 36 Acres | Land use and crop distribution 2/ Production Open land 5,633 3/ Crops 5,070 3/ Cotton 2,219 Lbs.Lint 354 Cottonseed (2,219) Ton 3186 Corn 215 Bu. 32 Soybeans 1,457 Bu. 21 Oats (Grain) 437 Bu. 28 Oats (Sup.Past.) (70) Lbs.Beef 70 Grain Sorghum 140 Bu. 20 Perm. Pasture 279 Lbs.Beef 180 Idle 323 180 Other 1/ 563 180 Woodland 36 Acres 180 |

/ Farmsteads, farm roads, waste and non-agricultural / Parenthetical amounts are duplicated acreages.

Calculated from Columns 3 and 6; rounded to nearest unit Total area zone A reduced by 151 acres urban, 5 acres water and 27,449 acres already drained or not requiring drainage.

State: Reach: Project: Basin: St. Francis River Buffalo Ditch Arkansas

SUMMARY - TABLE III A

ZONE FOR DRAINAGE CALCULATIONS ONLY

COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION, PRODUCTION COSTS AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT

(Based on projected prices)

| | | | 16 | | | iltural | non-agricu | waste and | Farmsteads, farm roads, waste and non-agricultural | 1/ Farm |
|---------|-------------------|--------------|----------------------------------|--|---------|------------|------------|-----------|--|----------|
| | | 10 | ** | ** | : | •• | 60 | : | | •• |
| 15,494 | 63,607,15,494 | •• | 79,101 | 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1 | - | •• | | 1,029 / | TOTAL | ** |
| | 00 | • | •• | | | • | a Acres | 8 | Woodland | - will |
| 4 | •• | •• | | | | ••. | *** | 103 | Other 1/ | •• |
| | •• | 40 | | • | 9 21 40 | | \$ | 20 | Idle " | • |
| 615 | 1,472 : | 31.32 | 2,087 | 2005 | 10,405 | 221 z | :Lbs.Beef | £ .47 | Perm. Pasture | •• |
| 471 | 1,275 : | 18,48 : | : 1,746 | 90 | 1,940 | \$ 28 . | * Bu. | \$ | Oats (Grain) | •• |
| 5,618 | 6,167: | : 29.37 : | : 11,785 | 2.30 | 5,124 | 24 1 | * Bu. | 210 | Soybeans | •• |
| 1,211 | 1,767 : | : 33.34 : | 2,978 | 1.45 | 2,054 | 3 39 3 | Bu. | 53 | Corn | 06 |
| | •• | 00 | a 11,185 | 8 63.00 | 177.55 | : .3369 : | * Ton | : (527) | Cottonseed | •• |
| 7,579 | 52,926 : 7,579 | : 100.43 : | \$ 49,320 | . 25. | 197,280 | \$ 374 . | *Lbs.Lint | \$ 527 | Cotton | • |
| | ** | : 4/ : | es i | i. | 1 2 | 3/ : | | 926 | Crops | • |
| | ** | | •• | • | * | •• | • | 1,029 | Open land | All : (|
| Dollars | Dollars : Dollars | Dollars : | * Dollars | Dollars | | | 4 | | | |
| Return | Total : | Per Acres | : Total | Per Unit | Total | Per Acres | : Unit | a Acres | distribution | Unit : |
| Net | roduction: | *Cost of p | production : Cost of production: | *Value of | | Production | : | 2/ | Land use and crop | Soil : I |
| | (10) : | : (9) : | (8) | 1 (7) | (6) | : (5): | : (4) | : (3) | (2) | : (T) |
| , | | | | | | | | | | |

Parenthetical amounts are duplicated acreages.

Cal culated from Columns 3 and 6; rounded to nearest unit

Calculated from Columns 3 and 10; rounded to nearest cent

Total area zone A reduced by 151 acres urban, 5 acres water, 36 acres woodland not anticipated to be cleared, and 32,053 acres already drained, not requiring drainage or not anticipated to be drained.

State: Reach: Project: Basin: Buffalo Ditch St. Francis River Arkansas

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT COMPUTATION OF AGRICULTURA PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE CALCULATIONS ONLY (Based on projected prices) SUMMARY - TABLE IV A

| 1/ | | | | | | | | | | | | A11 | | Unit | Soil | (T | |
|--|-----------------|----------|----------|------------|---------------|----------------------|------------|---------|--------------|-----------------|---------|-------------|----------------------|----------------|--|--------------|--|
| Farmsteads, farm roads, waste and non-agricultural | n TOTAL | Woodland | other 1/ | : Idle | Perm. Pasture | oats (Grain) | s Soybeans | : Corn | : Cottonseed | Cotton | : Crops | * Open land | | : distribution | Land use and crop | : (2) | |
| ads, waste | 1,029 5/ | 1 | 103 | 2 0 | \$ 47 | 69 | : 210 | 53 | : (527) | : 527 | 926 | : 1,029 | •• | a Acres | : 2/ | : (3) | |
| and non-agi | | * Acres | •• | •• | *Lbs.Beef | 8 Buo | : Bu. | : Bu. | : Ton | *Lbs oLint | •• | •• | •• | : Unit | 00 | : (4) | |
| ricultural | 00 00 | •• | •• | •• | 395 • | 2 47 2 | 27 | • 65 | : .5462 : | : 607 : | 3/ : | •• | •• | Per Acres | Production | : (5) : | |
| | | | | | 18,565 | 3,258 | 5,745 | 3,449 | 287.84 | 319,820 | | | | Total | | (6) | |
| | •• •• | •• | •• | •• | 2005 | . 90 | 2.30 | 1.45 | : 63,00 | . 25 | •• | •• | Dollars | Per Unit | *Value of | : (7) | |
| | 122,958 | ** | •• | •• | 3,722 | 2,932 | : 13,214 | : 5,001 | : 18,134 | 1 79,955 | •• | •• | : Dollars | : Total | *Value of production : Cost of production: Net | : (8) | |
| | •• •• | •• | •• | •• | : 52.78 | : 28.77 | : 31.70 : | : 59,62 | •• | : 157,17 : | . 4 | •• | :Dollars | Per Acre: | :Cost of I | : (9) | |
| | 97,113 : 25,845 | •• | •• | •• | 2,480 : | 1,985 : | 6,657 | 3,160 : | •• | 82,831 : | •• | •• | :Dollars : Dollars : | Total : Return | or oduction: | : (10) : | |
| | 25,845 | | | | 1,242 | 947 | 6,557 | 1,841 | | 15,258 | | | Dollars | Return | Net | : (11) | |

Calculated from Columns 3 and 6; rounded to nearest unit Parenthetical amounts are duplicated acreages. Calculated from Columns 3 and 10; rounded to nearest cent

|जार्भ्याल|

Total area zone A reduced by 151 acres urban, 5 acres water, 36 acres woodland not anticipated to be cleared, and 32,053 acres already drained, not requiring drainage or not anticipated to be drained.

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Basin: St. Francis River
Project: Buffalo Ditch
Reach: 1
State: Arkansas

SUMMARY - TABLE II B

ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS

COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| 1 | | | | | | | | |
|------|---------------------|-------------|--------|-----------------|------------|-----------|--|--|
| (1) | : (2) | \$ 5 | (3) | : (4) | : (5) | (6) | | |
| Soil | : Land use and crop | | 2/ | 12 1 1 1 | Production | 1 | | |
| Unit | : distribution | : A | Acres | : Unit | :Per Acre: | Total | | |
| | | : | | • | 1 | | | |
| All | : Open land | 2 .2 | 24,827 | \$ | : | | | |
| | : Crops | \$ 2 | 22,345 | 1 1 1 1 1 1 | 3 . 3/ . 1 | | | |
| | * Cotton | • | 8,351 | :Lbs.Lint | : 385 | 3,214,125 | | |
| · + | : Cottonseed | ·: (| 8,351) | : Ton | : .3464 | 2,892.71 | | |
| | * Corn | 1 | 1,134 | # Buego | : 34 : | 38,757 | | |
| | : Soybeans | | 9:598 | Bu. | : 23. | 223,991 | | |
| | : .Oats (Grain) | : | 469 | # Bu. | 20 1 | 9,478 | | |
| 9 | : Perm. Pasture | | 607 | :Lbs.Beef | s 183 i | 110,835 | | |
| | : Idle | * | 2,186 | \$ | 3 | | | |
| | : Other 1/ | 1 | 2,482. | | | | | |
| | :Woodland | 8 | 1,766 | * Acres | : | : | | |
| | * TOTAL | : 2 | 26,593 | ,2 | 2 | , | | |
| - | | : | 4/ | : | : | | | |

^{1/} Farmsteads, farm roads, waste and non-agricultural
2/ Parenthetical amounts are duplicated acreages.
3/ Calculated from Columns 3 and 6; rounded to nearest unit
4/ Total area zone B reduced by 249 acres water.

| e.o , | State: | Reach's | Projects | Basin: |
|-------|----------|---------|---------------|-------------------|
| • | Arkansas | F 5 | Buffalo Ditch | St. Francis River |

COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION PROJECT PROJUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS (Based on projected prices) SUMMARY - TABLE III B

| 1/1 | | | | | | • | | | | | | | | | | All | ~ | Unit . | Fios | (1) | |
|------------------------------|----|---------------------|-----------|-----------|---------|---------------|-----------------|--------------------|----------------|------------|-------------|-----------|----------------|-------------|----------|-------------|------------|----------------|---|---------|--|
| Farmsteads, farm roads | •• | : TOTAL | Woodland | s Other 1 | · Idle | Ferm. Pasture | : Grain Sorghum | : Oats (Sup.Past.) | * Oats (Grain) | Soybeans | Rice | : Corn | : Cottonseed . | * Cetton | * Crops | * Open land | e e | distribution : | : Land use and crop : | (2) | |
| s, waste ar | | 25,887 | 1 | 2,588 | : 1,308 | : 636 | 509 | : (20) | : 1,633 | \$ 6,908 | 2 73 | 8 · 1,173 | : (11,059) | : 11,059 | : 23,299 | 25,887 | • | a Aores | 2/ | : (3) | CORP. N. A. Hallander-To-Andread Control of the Con |
| , waste and non-agricultural | •• | • | : Acres : | ** | •• | :Lbs.Beef : | & Buo . | :Lbs.Beef : | 8 Buo | Bu. | s Cwt. | Buo : : | · Ton | :Lbs.Lint : | | ,00 | | s Unit | | : (4) : | The Company of the Control of the Co |
| ultural | •• | •• | •• | •• | •• | 304 : | 25 | 130 : | 40 : | 27. | 33 | 48. | c4545. : | | 3/. | •• | •• | &Per Acre: | Production | (5).: | STREET, STREET |
| | | | | | | 193,245 | 12,725 | ,2,600 | 65,527 | 186,335 | 2,409 | . 56,472 | 5,026.36 | 5,584,840 | | | | Total . | | (6) | |
| | •• | ••• | | •• | •• | 2005: | 1.53: | 2005: | .90: | 2,30: | 3.75: | 1,45: | : 63,00: | . 25: | | •• | Dollars: : | Per Unit: | Value of production : Cost of production: | (7) | |
| | •• | 2,350,071: | •• | | •• | 38,746: | 19,469: | 521: | 58,975: | 428,570: | . 9,034: | 81,885: | 316,661: | 1,396,210: | •• | | Dollars :1 | Total :1 | oduction :(| (8) | |
| | •• | •• | •• | •• | | 41.62 : | 22.13 : | 11.83 : | 24.59 : | 31,47'; | 106.67: | 42.11 : | · , | 134.37 :1 | 4/. | • | Dollars: | Per Acres | lost of pr | : (6) | 3 . 3 . |
| | •• | :1,838,714: 511,357 | 2 | •• | •• | 26,468: | 11,264; | 237: | 40,159; | 217,372: | 7,787: | 49,392: | ••. | 1,486,0358 | | | Dollars : | Total: : | oduction: | (10) | |
| | | 511,357 | | | • | 12,278 | .8, 205 | 284 | 18,816 | 211, 198 % | 7 | 32,493 | | 226,836 | | | Dollars | Return | Net | (11) | |

Prod 8.

Total area zone B reduced by 249 acres water and 706 acres woodland not anticipated to be cleared.

and 10; rounded to nearest cent

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Calculated from Columns 3

Calculated from Columns 3 and 6; rounded to nearest unit

Parenthetical amounts are duplicated acreages.

State: Reach: Project: Basin: Sto Francis River Buffalo Ditch Arkansas

ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS SUMMARY - IV B

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION (Based on projected prices)

| (2) (3) (4) (5) (6) (7) (8) (9) (10) (10) se and crop (2) (10) (10) (10) se and crop (10) (10) (10) (10) (10) (10) (10) (10) | | | | (1) Soil Unit |
|--|---|---|---|--|
| ## (4) : (5) : (6) : (7) : (8) : (9) : (10) | | Soybeans Oats (Grain) Grain Sorghum Perm. Pasture | Crops Cotton Cottonseed Corn | (2) Land use and crop distribution Open land |
| ## (4) : (5) : (6) : (7) : (8) : (9) : (10) | | 90 94 00 00 0 | | 00 00 00 00 00 00 1 100 |
| ## (4) : (5) : (6) : (7) : (8) : (9) : (10) | 747 2,588 2,588 5,887 5,887 | 7,037 897 509 636 | 2,218 2,218 2,218 1,182 | (3) ores |
| (5) : (6) : (7) : (8) : (9) : (10) : (10) Production Walue of production Cost of production Walue of production Cost of production Walue of production Cost of production Cost of production Walue of production Cost of | . 30 ° 00 00 | at B B B B B B | B B B B B B B B B B B B B B B B B B B | - C |
| (6) : (7) : (8) : (9) : (10) : (*Value of production : Cost of production: Notal : Per Unit : Total : Per Acre: Total : Reference: Dollars : Dol | cres | u. Beef | •Lint on u• | (4) |
| (6) : (7) : (8) : (9) : (10) : (*Value of production : Cost of production: Notal : Per Unit : Total : Per Acre: Total : Reference: Dollars : Dol | | | | Prod |
| (6) : (7) : (8) : (9) : (10) : (*Value of production : Cost of production: Notal : Per Unit : Total : Per Acre: Total : Reference: Dollars : Dol | | 27 244 25 | 547 527 53 | 5) huction |
| (7) (8) (9) (10) (10) Walue of production Cost of production: New York of production: New York of production: New York of Per Agres: Total Resolution: New York of Per Agres: Dollars: | 00 00 BR 05 00 | N 10 00 00 0 | • • • • • • • • • • • • • • • • • • • | . , |
| (7) (8) (9) (10) (10) Walue of production Cost of production: New York of production: New York of production: New York of Per Agres: Total Resolution: New York of Per Agres: Dollars: | • | 189,8 39,3 12,7 218,1 | 688,4 019, 62,1 | (6) otal |
| (8) (9) (10) (10) production :Cost of production: No. 1, 672, 121: 143.65: 1,755.082: 2: 379.238; 90.059: 46.19: 54.593; 9.307: 108.92: 7.951; 436.731: 31.47: 221.431: 2.35.393: 26.80: 24.039: 19.469: 22.13: 11.264: 43.739: 46.42: 29.523: 2.5686.057: 2.5686. | | 50 55 55 56 56 56 56 56 56 56 56 56 56 56 | 8 4 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 | * * * * * * * * * * * * * * * * * * * |
| (8) (9) (10) (10) production :Cost of production: No. 1, 672, 121: 143.65: 1,755.082: 2: 379.238; 90.059: 46.19: 54.593; 9.307: 108.92: 7.951; 436.731: 31.47: 221.431: 2.35.393: 26.80: 24.039: 19.469: 22.13: 11.264: 43.739: 46.42: 29.523: 2.5686.057: 2.5686. | | 8 H 8,0 | ω. μ. 6 Β. μ. κ | (7) alue er Un ollar |
| 0 0 0 D Z | | 550 | 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | s tit p |
| 0 0 0 D Z | 2 68 | * # H & * | 1,673 379 | (8) Tota 1011a |
| 0 0 0 D Z | 5,057 | 6,731 6,393 9,469 3,739 | 2,121 9,238 0,059 | tion |
| 0 0 0 D Z | | 99 FF 99 4 | | Cost Per Doll |
| 0 0 0 D Z | 05 00 00 00 | 47 4 80 4 2 3 | | of p Aore: |
| 0 0 0 D Z | 2,103 | 221 24 211 | 1,755 | roduc Tot Doll |
| 0 0 0 D Z | 883 | 431 039 264 523 | 082 | tion: |
| المناف ق قرار والمالية | 582 | 215,300 11,354 8,205 14,216 | 296 | (11) Net Return Dollars |
| 96,277 96,277 11,356 11,354 14,216 | 174 | 205 | | rn |

Farmsteads, farm roads, waste and non-agricultural

Parenthetical amounts are duplicated acreages.

Calculated from Columns 3 and 6; rounded to mearest unit

Total area zone B reduced by 249 acres water and 706 acres woodland not anticipated to be cleared.

rounded to nearest cent

(जिलिलीली) Calculated from Columns 3 and 10;

Basin:
Project:
Reach:
State: St. Francis River Buffalo Ditch Arkansas

TABLE V REACH SUMMARY BY SOIL MAPPING UNITS

| 1/ Tot cl 2/ Tot | TOTAL: | Subtotal: | 12 4 3 | Subtotal: | 16 : | (1) : Soil : Unit : |
|---|-------------------------|-------------|--------------------------------------|----------------------------|---|---|
| al area zor | 26,916 | 25,887 2/ | 997 18,854 3,343 | 1,029 1 2,693 | 679 350 | (2) |
| Total area zone A reduced by 151 acres urban, 5 acres water, cleared, and 32,053 acres already drained, not requiring dra Total area zone B reduced by 249 acres water and 706 acres wo | : 2,429,172 : 1,902,321 | /:2,350,071 | 85,385 : 1,863,747 : 211,057 : | 79,101 | 62,304 : 16,797 : | ; (3) Futur (Prod |
| 151 acres url lready drained 249 acres wat | 1,902,321 | 1,838,714 : | 65,201 : 1,465,256 : 153,279 : | 63,607 : | 48,346 : 15,261 : | Future Without Project (Production in Dollars s: Cost : 1 |
| oan, 5 acres d, not requir cer and 706 a | 526,851 | 511,357 | 20,184 398,491 57,778 | 15,494 ZONE B 34,904 | ZONE A 13,958 1,536 | ject lars) |
| O D | 2,809,015 | 2,686,057 | 95,919 2,140,341 228,423 | . 0 | - (not subject 84,541 838,417 | : (6) : Futur : (Produc |
| 36 acres woodland not anticipated to be inage or not anticipated to be drained. odland not anticipated to be cleared. | ; ;2,200,996 ; | :2,103,883 | : 74,363 : 1,682,164 : 168,263 : | flooding) 179,093 | (not subject to flooding) 84,541 : 66,051 : 38,417 : 31,062 : | 6) : (7) : Future With Project (Production in Dollars) oss : Cost : |
| anticipal ted-to-be d to be cl | 608,019 | 582,174 | 21,556 458,177 60,160 | 25,845 | 18,490 | (8) |
| drained. | : 81,168 | : 70,817 | 1 372 59 686 2 382 | : 10,351 : 7,377 | 4,632 8 5,819 | : (9) *Difference in *Net Production |

Reach: State: Project: Basin:

St. Francis River Buffalo Ditch

Arkansas

ANALYSIS OF FARM DRAINAGE SYSTEM COSTS TABLE VII

| | | | ************************************** | . | | | → | Zone | (1) |
|----------|----------|-------------------------------|--|--|-----------|----------------------|-------------------------|--------------------------------|--------------|
| TOTAL | Subtotal | 4 - General crops 4 - Pasture | 3 - General crops 3 - Pasture | 1 - General crops 1 - Rice 1 - Pasture | *Subtotal | 16 - General crops : | 4 - General crops : | Soil mapping unit and land use | 3 (2) |
| 6,343 1/ | 5,417 1/ | 4,768 148 | 158 | 313 10 | 926 1/ | 299 | Acres 580 5 | Area | (3) |
| 85,108 | 73,036 | 63,410 1,204 | 2,734 | 5,416 86 93 | 12,072 | 3,977 | Dollars 7,713 252 | Cost Installation 2 | (4) |
| 8,199 | 7,036 | 6,109 116 | 263 | 5522 9.88 | 1,163 | 383 | Dollars 743 24 | 13/ | : (5) |
| 9,761 | 8,403 | 7,317 | 421 | 6) N, W, U. | 1,358 | 459 3 | Dollars 890 6 | : Maint enance : Cost | (6) |
| : 17,960 | • 15,439 | 13,426 | 684 | 1,147 11 11 | 2,521 | 842 16 | 1,633 30 | * Annual *Cost | : (7) |

Includes engineering and contingency Amortized over 15 years at 5 percent Does not include 10 percent "other" land

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Basin: Project:

St. Francis River

Reach:

Buffalo Ditch

Arkansas

State:

TABLE VIII
ANALYSIS OF GROUP DRAI NAGE NEEDS AND COSTS

| | : | , | : Unit : | Total | | | | | | |
|--|-------------------|---------|------------|---------|--|--|--|--|--|--|
| Item | : Unit : | Amount | : Cost : | Cost | | | | | | |
| Excavation 1/ | : | | : Dollars: | Dollars | | | | | | |
| Spreading spoil 1/ | | | | | | | | | | |
| Clearing right-of-way 1/ | ::Cubic Yard: | 35,000 | : 0-20: | 7,000 | | | | | | |
| | ** | | : | | | | | | | |
| Kight-of-way easements | : Acres : | 11 | : 30.00: | 330 | | | | | | |
| | : | | : | | | | | | | |
| Crossings | Each : | 4 | : 300,00: | 1,200 | | | | | | |
| Contract to the contract to th | : Each | | : 40.00: | 3.00 | | | | | | |
| Swinging water gaps | Each : | 4 | : 40.00: | 160 | | | | | | |
| Pipe drop structures | Each t | 2 | 200.00: | 400 | | | | | | |
| F | 1 | | : | | | | | | | |
| Flap gates | : Each : | 2 | : 100.00: | 200 | | | | | | |
| | : | | : | | | | | | | |
| Vegetative plantings | Acres : | 22 | 8.00: | 176 | | | | | | |
| | 1 1 | | : | | | | | | | |
| Total construction cost | t xx : | xx | : xx: | 9,466 | | | | | | |
| · | | 3.30 | : : | 0,100 | | | | | | |
| Engineering cost | * xx * | xx | : XX: | 947 | | | | | | |
| : | :: : | | : : | | | | | | | |
| Contingencies and legal | t xx t | XX | t XXt | 947 | | | | | | |
| | | | | | | | | | | |
| Total installation cost | : | | • | 11,360 | | | | | | |
| : | | | | 11,000 | | | | | | |
| Annual equivalent - installa | tion cost | | | • | | | | | | |
| (amortized for 30 years a | t 3½ percent) | · · | | 618 | | | | | | |
| | | | | | | | | | | |
| Annual maintenance cost : 473 | | | | | | | | | | |
| Approal logg of production | in 5 m last 0 | AL CALL | | | | | | | | |
| Annual loss of production - | right-of-way 2/ | | | 58 | | | | | | |
| Total annual cost of require | d group facilitie | s | | 1,149 | | | | | | |
| 14420 | 0-0-1 | | • | - 9 0 | | | | | | |

^{1/} These items included in excavation costs under normal contract procedures.

ent 2

^{2/} Annual loss of production - right-of-way. 3 acres @ \$19.25 per acre.

St. Francis River Basin: Project: Buffalo Ditch Reach: State: Arkansas

TABLE IX: SUMMARY OF ANNUAL NET PRODUCTION RETURNS AND ASSOCIATED COSTS

| | | , | |
|-------|---|--------------------------------|--|
| | (1) | (2) | : (3) : Discounted |
| ., . | Item | Total | * Amount |
| - | | Dollars | Dollars |
| 2. 3. | Net return with project Net return without project Gross benefit to project | 608,019 526,851 81,168 | xx xx 64,343 <u>2</u> / |
| 4. | Farm drainage cost a. Installation cost b. Maintenance cost c. Total | xx 8,199 9,761 17,960 | xx 2/ xx xx 14,237 |
| 5. | Group drainage cost | TX | xx 3/. |
| | a. Installation cost b. Maintenance cost 1/ c. Total | 618 531 1,149 | xx xx y54 |
| 6. | Conversion cost a. Installation cost b. Maintenance cost c. Total | XX | xx 4/ xx t xx |
| | | | The second secon |

Includes loss of production, right-of-way Discounted at 5 percent to account for estimated 10 year lag to full installation, maintenance, and benefit accrual. 3/ Discounted at 3 1 percent to account for estimated 10 year lag

to full installation, maintenance, and benefit accrual. No conversions; no table VI required

Basin: St. Francis River
Project: Buffalo Ditch
Reach: 2
State: Arkansas & Missouri

TABLE I PRESENT LAND USE

| Zone | | | | | l:Urban | | : Total |
|--|--|---|---|------|--------------|------|---|
| Zone A | 3 : 4 : 11 : 12 : 16 | : | 9 15,982 1,358 1,199 14,029 | 98 | : - | : - | : 9 :16,080 : 1,367 : 1,199 :14,038 |
| Subtotal - all Urban Water Total - Zone A | | | 32,577 | - | : 266 : - | : 9 | :32,693 : 266 : 9 :32,968 |
| Zone B | : 3 | : | 1,933 | : 23 | | : - | : 1,955 : 4,422 : 9 |
| Subtotal - all | soils | | 6,341 | 45 | | | 6,386 |
| Water Total - Zone B | ······································ | | 6,341 | 45 | : - | : 84 | 6,470 |
| GRAND TOTAL - Reach | 2 | : | 38,918 | 161 | | : 93 | :39,438 |

Basin: St. Francis River
Project: Buffalo Ditch
Reach: 2
State: Arkansas & Missouri

SUMMARY - TABLE II A

ZONE FOR DRAINAGE CALCULATIONS ONLY

COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1) Soil | (2) Land use and crop | (3) | : (4) : : Pro | (5) : | (6) |
|-------------|--|-------|---|---|---|
| Unit | distribution | Acres | : Unit : H | Per Acre: | Total |
| A11 | Open land Crops Cotton Cottonseed Corn Soybeans Oats (Grain) Oats (Sup.Past.) Grain Sorghum Perm. Pasture Idle Other 1/ Woodland TOTAL | 3,913 | Lbs.Lint: Ton Bu. Bu. Lbs.Beef: Bu. Lbs.Beef: | 3/ 330 •2972 28 20 24 70 20 180 | 3,335,780 3,002,20 36,312 187,368 95,844 11,900 8,460 76,140 |

^{1/} Farmsteads, farm roads, waste and non-agricultural 2/ Parenthetical amounts are duplicated acreages

^{3/} Calculated from Columns 3 and 6; rounded to nearest unit 1/ Total area Zone A reduced by 266 acres urban, 9 acres water and 3,206 acres already drained or not requiring drainage.

Basin: St. Francis River
Project: Buffalo Ditch
Reach: 2
State: Arkansas & Misscuri

SUMMARY - TABLE III A ZONE FOR DRAINAGE CALCULATIONS ONLY

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION

(Based on projected prices)

| | | | | | | | | | | | All | 1 | Unit | Soil | (1) | |
|------------------|---------------------------------------|---------|-----------------|---------------------|----------------|------------|----------|--------------|-----------|---------|-------------|------------|----------------|---------------------|--------------|--|
| TOTAL | : Woodland | : Idle | : Perm. Pasture | : Oats (Sup. Past.) | : Oats (Grain) | : Soybeans | : Corn | : Cottonseed | : Cotton | Crops | : Open land | i | : distribution | : Land use and crop | : (2) | |
| 12,339 5/ | # # # # # # # # # # # # # # # # # # # | 273 | 296 | : (178) | 874 | 2,939 | : 437 | : (6,286) | 6,286 | 501,115 | : 12,339 | | Acres | 2/ | (G) | |
| | Acres | • • • • | :Lbs.Beef | :Lbs.Beef : | Bu. | Bu. | Bu. | Ton | :Lbs.Lint | •• | •• | •• | . Unit | Pr | (t) : | |
| | •• | | 235 | | : 26 : | 22: | 32 | | 1 | w | •• | | :Per Acre : | Production | (5) | |
| | | | 69,560 | 18,690 | 22,658 | 65,659 | 13,886 | : 1,976.62 | 2,196,240 | | | | Total | | 6) | |
| | • | | 2005 | 2005 | 90 | 2,30 | 1.45 | 63.00 | . 25 | | | Dollars | Per Unit | Value of production | (7) | |
| 882,824 | | | 13,947 | 3,747 | 20,392 | 151,016 | 20,135 | 124,527 | 549,060 | | | Dollars | Total | production | (8) | |
| | •• •• | ••• | 33.19 | 9,13 | 17,45 | : 27,71: | : 28,24: | | 95.22 | E. | • | : Dollars: | Per Acre: | :Cost of production | : (9) : | |
| 719,015 :163,809 | | | 9,824 | 1.625 | 15.251 | 81°T79 | 12,340 | | 598,523 | | | Dollars | Total | roduction | (OT) | |
| 163,809 | | | 4,123 | 2.122 | 5.138 | 69,567 | 7.7950 | | 75.061 | | | Dollars | | •• | · (王) | |

Calculated from Columns 3 and 6; rounded to nearest unit Parenthetical amounts are duplicated acreages Farmsteads, farm roads, waste and non-agricultural Total area Zone A reduced by 266 acres urban, 9 acres water, 107 acres woodland not Calculated from Columns 3 and 10; rounded to nearest cent

or not anticipated to be drained.

anticipated to be cleared, and 20,247 acres already drained, not requiring drainage

Basin: St. Francis River
Project: Buffalo Ditch
Reach: 2
State: Arkansas & Missouri

S

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE CALCULATIONS ONLY (Based on projected prices) SUMMARY - TABLE IV A

| <u></u> | | (1) Soil Unit |
|--|------------------|--|
| Open Land Crops Cotton Cottonseed Corn Soybeans Oats (Grain) Oats (Sup. Past.) Perm. Pasture Idle Other 1/ Woodland TOTAL | | : (2) : Land use and crop : distribution |
| 12, 339 6, 286 (6, 286) 1437 2, 939 874 (180) 296 273 1, 234 1, 234 | | (3) 2/ Acres |
| Lbs Lint Ton Bu Bu Lbs Beef Lbs Beef | •• | (t) |
| 547 <u>3/</u> 4922 27 46 160 395 | •• | : (5) Production Per Acre |
| 3,437,670 3,093,90 22,853 78,241 40,592 28,800 116,920 | | (6) Total |
| 2005 2005 2005 2005 | :Dollars : | : (7) : (8) :Value of production :Per Unit : Total |
| 859,417 194,916 33,137 179,955 36,533 5,774 23,442 | Dollars | (8) roduction Total |
| 142 88 143 75 31 10 28 28 15 04 52 78 | Dollars: Dollars | : (9) : (10) : :Cost of production: :Per Acre: Total |
| 898,149:156,184 19,119: 14,018 91,389: 88,566 24,718: 11,815 2,707: 3,067 15,623: 7,819 | | (10) : oduction: |
| 11,815 3,067 11,815 11, | Dollars | (11) Net Return |

Y Farmsteads, farm roads, waste and non-agricultural
Y Parenthetical amounts are duplicated acreages

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cont

Total area Zone A reduced by 266 acres urban, 9 acres water, 107 acres woodland not anticipated to be cleared, and 20,247 acres already drained, not requiring drainage or not anticipated to be drained.

Basin: St. Francis River
Project: Buffalo Ditch
Reach: 2

State: Arkansas & Missouri

SUMMARY - TABLE II B

ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS

COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1) Soil Unit | (2) Land use and crop distribution | : (3) : 2/ : Acres | : (4) : : : Unit : | (5) : Production Per Acre: | (6) Total |
|---------------|---|--|-----------------------------------|----------------------------------|---|
| All | Open land Crops Cotton Cottonseed Corn Soybeans Oats (Grain) Perm. Pasture Idle Other 1/ Woodland TOTAL | 6,341 5,707 2,323 (2,323) 281 1,893 712 223 275 634 45 | Lbs.Lint Ton Bu. Bu. Bu. Lbs.Beef | 3685 44 24 34 202 | 951,300 856,17 12,279 45,305 23,978 45,120 |

^{1/} Farmsteads, farm roads, waste and non-agricultural

2/ Parenthetical amounts are duplicated acreages

1/ Total area Zone B reduced by 84 acres water.

^{3/} Calculated from Columns 3 and 6; rounded to nearest unit

State: Reach: Project: Buffalo Ditch Basin: St. Francis River Arkansas & Missouri

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS (Based on projected prices) SUMMARY - TABLE III B

| , | | | | | | 44 | | | • | | | •• | 44 | A TLE A | | Unit | Soil: | (<u>T</u>) |
|---|-------------------|----------|---------|------|---------------|---------------|------------------|--------------|-----------|-----------|------------|------------|--------|-----------|---------------------|------------------|----------------------|--------------|
| | TOTAL | Woodland | Other 1 | Idle | Perm. Pasture | Grain Sorghum | Oats (Sup.Past.) | Oats (Grain) | Soybeans | Corn | Cottonseed | Cotton | Crops | Open land | | distribution | Land use and crop | (2) |
| | : 6,341 <u>5/</u> | | : 634 | 250 | 223 | 119 | (80) | 135 | 1,633 | 229 | : (2,818) | 2,818 | 5,707 | : 6,341 | •• | Acres | 2/ | (3) |
| | | : Acres | | •• | :Lbs.Beef | · Bu. | :Lbs.Beef | : Bu. | Bu. | Bu. | Ton | :Lbs .Lint | .: | •• | •• | : Unit | • | (‡) |
| | •• •• | 1 | •• | •• | 286 | | . 125 | 39 | : 27 | 57 | 7.444 | : 491 | Iw | | •• | Per Acre | Production | : (5) |
| | • | | •• | | 63,705 | 2,975 | 10,000 | 17,050 | 747,644 | 12,175 | 1,244.62 | 1,382,905 | | | | Total | | (6) |
| - | - | | | * | 2005 | 1.53 | 2005 | . 90 : | 2.30 : | 1.45 | : 63,00 : | . 25 | •• | | Dollars : | Per Unit: | Value of production | (7) |
| | 579,383 | | | | 12,773 | 4,552 | 2005 | 15,345 | 102,918 | 17,653 | تتبار87 | 345,726 | • | | : Dollars | Total | • | (8) |
| | | •• | •• | •• | : 39.40: | : 22,13: | : 11.28: | : 23.91 : | : 31.74 : | : 04.40 : | •• | : 129.16: | !E | | :Dollars : | :Per Acre: Total | :Cost of production: | : (9) : |
| | h49,162 :130,22. | | •• | •• | 8,786: | 2,633 : | 902 : | 10,403 : | 51,831 : | 10,626: | •• | 363,981 : | •• | •• | : Dollars : Dollars | ı | roduction: | (OT) |
| | 130,221 | | | | 3,987 | 1,919 | 1,103 | 4,942 | 51,0875 | 7,027 N | • | 60,156 | | | Dollars | Return | Net | (11) |

Farmsteads, farm roads, waste and non-agricultural

Parenthetical amounts are duplicated acreages

Calculated from Columns 3 and 10; rounded to nearest cent Calculated from Columns 3 and 6; rounded to nearest unit

Total area Zone B reduced by 84 acres water and 45 acres woodland not anticipated to be cleared.

Basin: St. Francis River
Project: Buffalo Ditch
Reach: 2
State: Arkansas & Missouri

SUMMARY - TABLE IV B ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS

PRODUCTION COSTS AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION (Based on projected prices)

| •• •• | : Wo | • •• | •• | •• | •• | •• | •• | •• | •• | | All : Or | •• | Unit: | ·· | (L) : |
|-----------------|-------------|------|---------------|---------------|--------------|------------|----------|------------|-------------|----------|-----------|------------------|--------------|---------------------|---------|
| TOTAL | Woodland J | Idle | Perm. Pasture | Grain Sorghum | Oats (Grain) | Soybeans | Corn | Cottonseed | Cotton : | Crops : | Open Land | | distribution | Land use and crop | (2) |
| : 6,341 5/ | . 0,4 | 170 | 223 | : 119 | : 159 | : 1,651 | : 246 | : (3,139) | 3,139 | : 5,707: | : 6,341 | •• | : Acres | 2/ | : (3) |
| ** ** | : Acres | | :Lbs.Beef : | : Bu. : | : Bu. : | : Bu. : | : Bu. : | : Ton : | :Lbs.Lint : | •• | •• | •• | : Unit : | Pr | : (4) : |
| •••• | •• • | • •• | <u>y</u> | 25 | 147 : | 28 : | 61 : | •• | •• | 3/: | •• | | :Per Acre : | Production | (5) |
| •• •• | •• • | | : كتدولة | 2,975 : | 7,473: | 46,259 : | 15,033: | 1,562.24: | 1,735,830: | •• | •• | •• | Total : | | (6) |
| | : | • •• | •• | 1.53 : | •• | •• | •• | •• | 25 | •• | •• | Dollars: | Per Unit: | Value of production | (7) |
| 686,710 | | | ٤ 098 بلا | 4,552 | 6,726 : | 106,396 | 21,798 : | 98,421 : | 433,957 : | | •• | Dollars : | Total : | | (8) |
| | •• •• | | •• | •• | •• | 32.18: | •• | •• | 7 : 82° TMT | : /# | | Dollars: Dollars | Per Acre: | Cost of production: | (9) |
| 537,742:148,968 | •• • | | •• | •• | •• | 53,124 : 5 | •• | •• | 454,153 : " | •• | •• | •• | Total : I | | : (OT) |
| 896.81 | \$ •#*** | | 4,800 | 1,919 | 2,177 1 | 53,272 | 8,575,33 | | 78,225 | | | Dollars | Return | Net | E |

Calculated from Columns 3 and 6; rounded to nearest unit Parenthetical amounts are duplicated acreages Farmsteads, farm roads, waste and non-agricultural Total area Zone B reduced by 84 acres water and 45 acres woodland not Calculated from Columns 3 and 10; rounded to nearest cent anticipated to be cleared.

Basin: St. Francis River Project: Buffalo Ditch Reach: 2

State: Arkansas & Missouri

TABLE V REACH SUMMARY BY SOIL MAPPING UNITS

| TOTAL | Subtotal: | +w | | Subtotal: | 16 | • | Soil : Unit : | (L) |
|-----------|-----------|---------------------|--|-----------|--------------------|---------------------------------------|-------------------------|--------------------------------|
| 18,680 | 6,341 2/ | 1,933 4,408 | | 12,339 1/ | 6,586 5,753 | | Acres | (2) |
| 1,462,207 | 579,383 | 160,575 | | 882,824 | 607,837 274,987 | ** | (Produ | (3) Futur |
| 1,168,177 | Щ9,162 | 122,562 326,600 | *** | 719,015 | 169,578 249,437 | ; | (Production in Dollars) | : (4) : Future Without Project |
| 294,030 | 130,221 | 38,013 92,208 | ZONE B | 163,809 | 138,259 | ZONE A | lars) | (5) |
| 2,019,884 | 686,710 | 186,140. 500,570 | - (subject to flooding) | 1,333,174 | 759,262 573,912 | - (not subject | (Product | (6) Future |
| 1,589,447 | 537,742 | 144,312 393,430 | flooding) | 1,051,705 | 594,702 457,003 | (not subject to flooding) | (Production in Dollars) | Future With Project |
| 430,437 | 148,968 | 107,140 | | 281,469 | 164,560 | | Net | (8) |
| 136,407 | 18,747 | 3,815 11,932 | in the second of | 117,660 | 26,301 91,359 | e e e e e e e e e e e e e e e e e e e | Net: Net: | : (9) :Difference in |

^{2/} Total area Zone B reduced by 84 acres water and 45 acres woodland not anticipated to be cleared. 1/ Total area Zone A reduced by 266 acres urban, 9 acres water, 107 acres woodland not anticipated to be cleared, and 20,247 acres already drained, not requiring drainage or not anticipated to be drained.

Basin: St. Francis River
Project: Buffalo Ditch
Reach: 2
State: Arkansas & Missouri

TABLE VII ANALYSIS OF FARM DRAINAGE SYSTEM COSTS

| | . : | | ₩ | | | А | | Zc119 |
|-----------|----------|-----------------------------------|-------------------------------|-------------|---------------------|-----------------------------------|---------|------------------------------------|
| TOTAL | Subtotal | th - General crops the Pasture | 3 - General crops 3 - Pasture | Subtotal | :16 - General crops | : 4 - General crops : 4 - Pasture | | : Soil mapping unit : and land use |
| 13,523 3/ | 2,418 3/ | 1,681 | ## ## | : 11,105 3/ | 5,178 | 5,631 | Acres | Area |
| 180,462 | 34,305 | 22,356 | 11,14,3 382 | 146,157 | 68,862 | 74,886 2,409 | Dollars | : Total Cost :Installation 1/ |
| : 17,387 | 3,306 | 2,154 | 1,074 37 | 14,081 | 6,634 | 7,215 | Dollars | Annual Equivalent Instl. Cost 2/ |
| 20,976 | · 4,333 | 2,580 | 1,714 | 16,643 | 7,946 | 8,641 | Dollars | Annual Maintenance Cost |
| 38,363 | 7,639 | 15 162.64 | 2,788 66 | 30,724 | 14,580 | 15,856 288 | Dollars | Total Annual Cost |

Includes engineering and contingency
Amortized at 5 percent over 15 years
Does not include 10 percent "other" land.

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Basin: St. Francis River Project: Buffalo Ditch

Reach: 2

State: Arkansas & Missouri

TABLE VIII
ANALYSIS OF GROUP DRAINAGE NEEDS AND COSTS

| Item | : : Unit | :Amount | Cost | :Total :Cost :Dollars | | | | | | |
|--|----------------|------------|--------|-----------------------------|--|--|--|--|--|--|
| Excavation 1/ Spreading spoil 1/ Clearing right-of-way 1/ | : Cubic Yar | : | | 14,760 | | | | | | |
| Right-of-way easements | : Acres | 20 | 30.00 | 600 | | | | | | |
| Crossings | : Each | 8 | 300.00 | 2 پلون | | | | | | |
| Swinging water gaps | Each | . . | 40.00 | 320 | | | | | | |
| Pipe drop structures | : Each | 4 | 200.00 | 800 | | | | | | |
| Flap gates | : Each | 4 | 100.00 | 7100 | | | | | | |
| Vegetative plantings | : Acres | 40 | 8.00 | 320 | | | | | | |
| Total construction cost | .: .XX | : xx | XX | 19,600 | | | | | | |
| Engineering cost | : xx | : XX | 3CX. | 1,960 | | | | | | |
| Contingencies and legal | ×x | : xx | XX, | 1,960 | | | | | | |
| Total installation cost | | | | 23,520 | | | | | | |
| Annual equivalent - installation 30 years at $3\frac{1}{2}$ percent) | tion cost | (amortized | for | 1,279 | | | | | | |
| Annual maintenance cost : 980 | | | | | | | | | | |
| Annual loss of production - 1 | right-of-wa | ay 2/ | | 79 | | | | | | |
| Total annual cost of required group facilities : 2,338 | | | | | | | | | | |

^{1/} These items included in excavation costs under normal contract procedures.

^{2/} Annual loss of production - right-of-way. 5 acres @ \$15.74 per acre.

Basin: St. Francis River Project: Buffalo Ditch Reach: State: Arkansas & Missouri

TABLE IX SUMMARY OF ANNUAL NET PRODUCTION RETURNS AND ASSOCIATED COSTS

| | (1) | : (2) | : (3) : Discounted |
|----|---|--|------------------------------------|
| | Item | Total | : amount |
| 20 | Net return with project Net return without project Gross benefit to project | Dollars : 430,437 : 294,030 : 136,407 | Dollars xx xx 108,131 2/ |
| 40 | Farm drainage cost a. Installation cost b. Maintenance cost c. Total | xx : 17,387 : 20,976 : 38,363 | xx 2/ xx xx xx 30,411 |
| 5. | Group drainage cost a. Installation cost b. Maintenance cost 1/ c. Total | xx 1,279 1,059 2,338 | xx <u>3/</u> xx xx 1,91,1 |
| | Conversion cost a. Installation cost b. Maintenance cost c. Total | xx - | : xx 11/ : xx |

1/ Includes loss of production, right-of-way
2/ Discounted at 5 percent to account for estimated 10 year lag to full installation, maintenance, and benefit accrual.

3/ Discounted at $3\frac{1}{2}$ percent to account for estimated 10 year lag to full installation, maintenance, and benefit accrual.

4/ No conversions; no table VI required.

Basin: St. Francis River
Project: Buffalo Ditch
Reach: 3
State: Arkansas=Missouri

TABLE I PRESENT LAND USE

| | :Soil map. | -: Open | :Wooded | : Urban : | Water: | Total |
|-----------------|------------|--------------------|--------------|------------|----------|---|
| Zone | sping unit | (Acres) | : (Acres) | : (Acres): | (Acres) | (Acres) |
| | • : | | • | • • • • • | | |
| Zone A | • 7 | * 7 000 | . 107 | | | 7 706 |
| Lone A | : 3 | : 7,289 | : 107 | • | • | 7,396 |
| | : 4 | 8 - 977 | : 36 | : : | - 1 | 1,013 |
| | : 11 | :13,398 | | : - : | - | 13,398 |
| | : 12 | :19,622 | : 44 | : - : | - 1 | 19,666 |
| | 1 12SU | 2,655 | : 9 | | | 2,664 |
| | : 16 | :16,151 | : 613 | | ه به | 16,764 |
| 0 | | | | - | | |
| | l soils | :60,092 | . 809 | • | | 60,901 |
| Urban | <i>s</i> • | 🏮 i ja ja ja 🕶 🖖 🤼 | | : 1,465 | | 1,465 |
| Water | | \$ · · · | | : - : | | - |
| Total - Zone | A i | :60,092 | s 809 | : 1,465 : | - | 62,366 |
| | | | | | | |
| Zone B | ı · 3 | . 7 167 | 407 | | | 7 570 |
| roue p | • | 3,163 | §4 | - | | 3,570 |
| | : :4 | : 1,097 | : 136 | : - : | - | 1,233 |
| | : 12 | : 82 | \$ · · | \$ t | - | 82 |
| | : 16 | : 1,795 | : 104 | : - : | = | 1,899 |
| Subtotal - all | soils | : 6,137 | : 647 | 1 - 1 | - | 6,784 |
| Urban | | | | C | | |
| | .\$ | | | | 050 | 252 |
| Water | _ | \$ 10 mm | - | : - : | 256 | 256 |
| Total - Zone | В | : 6,137 | : 647 | : - : | 256 | 7,040 |
| GRAND TOTAL Rea | .ch 3 | :66,229 | : 1,456 | : 1,465 : | 256 | 69,406 |
| | | | -,-,- | | | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |

Basin: St. Francis River
Project: Buffalo Ditch
Reach: 3
State: Arkansas - Missouri

SUMMARY - TABLE II A ZONE FOR DRAINAGE CALCULATIONS ONLY COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1) : Soil : Unit : | | : (3 | 2/ : | : (5) Production: Per Acro | |
|---------------------|---|---|---|---|---|
| All: | Open land Crops Cotton Cottonseed Corn Soybeans Oats (Grain) Perm. Pasture Idle Other 1/ Woodland TOTAL | 24, 21, 7, (7, 3, 7, 2, | 417 : ,975 : ,656 :Lbs.Lint ,656) : Ton ,464 : Bu. ,061 : Bu. ,001 : Bu. ,872 :Lbs.Beef ,921 : ,442 : ,756 : Acres ,173 : | 3/ 2 : 278 2 : 2503 27 3 : 16 4 : 20 | 2,129,540 1,916.58 92,530 115,809 40,551 156,960 |

Parenthetical amounts are duplicated acreages.

Calculated from Columns 3 and 6; rounded to nearest unit

Total area zone A reduced by 1,465 acres urban and 35,728 acres

already drained or not requiring drainage.

Basin:
Project:
Buffalo Ditch
Reach:
State:
Arkansas - Missouri

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ZONE FOR DRAINAGE CALCULATIONS ONLY

COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION, PRODUCTION COSTS AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT (Based on projected prices)

| | | | | | | | | | | | All | | Unit | Soil | 日 |
|-------------------|-----------|------------|--------|-----------------|----------------|------------|------------------|----------------|-----------|---------|-------------|-------------------|------------------------|---|--------|
| * TOTAL | :Woodland | : Other 1/ | * Idle | : Perm. Pasture | : Oats (Grain) | * Soybeans | * Corn | * Cottonseed | : Cotton | : Crops | : Open land | • | : distribution | : Land use and crop | : (2) |
| •• •• | •• | •• | •• | •• | •• | •• | •• | ••• | •• | •• | •• | •• | ** | •• | •• |
| 14,210 5/ | .1 | 1,421 | 541 | 499 | 718 | 4,115 | 2,015 | (4,901) | 4,901 | 12,789 | 14,210 | | Acres | 2 | (3) |
| | | •• | •• | 118 | •• | **. | •• | •• | | •• | •• | 90 | * | •• | •• |
| : | Acres | | | Lbs.Beef | Bu. | Bu | Bu. | Ton | Lbs.Lint | | | | Unit | | (4) |
| ** ** | ** | •• | •• | •• | •• | ••. | •• | •• | •• | •• | 88 | •• | : Pe | Pro | •• |
| : | | ٠. | • | 195 | 24 | 18 · · · | 29 | 2676 | 297 | 3 | | | :Per Acre: | Production | (5) |
| * | •• | •• | ** | • | * | : | •= | •• <u> </u> | 1,6 | •• | •• | 04 | | p | |
| : . | | | | 97,305 | 17,120 | 73,828 | 58,832 | 1,311.70 | 1,457,445 | | | | Total | | (6) |
| | •• | •• | •• | . 2 | •• | 2 | 00 لسر | 8 63 | •• | •• | •• | Dollars | Per U | *Value | ; (7 |
| | | | | 2005 | 90 | • 30 | .45 | 63,00 | 25 | | | rs | nit | of | 7 |
| . 7 | •• | •• | •• | •• | •• | ** | •• | •• | •• Ø | •• | •• | •• U | 00 | pro | •• |
| 737,025 | | | | 19,510 | 15,408 | 69,803 | 85,306 | 82,637 | 64,361 | | | Dollars | Per Unit : Total | Value of production : Cost of production: Net | (8) |
| ** ** | ** | •• | •• | •• | •• | •• | •• | •• | •• | •• | •• | D | ; Pe | \$ C c | •• |
| | | | | 28,91 | 16.34 | 24.43 | 26.29 | | 84.97 | 4 | • | Dollars : Dollars | er Acre | ost of | (9) |
| 5 | -0 | •• | •• | •• | •• | # 1 | •• | •• | •• | •• | •• | : Do | | pro | " |
| 596,127 : 140,898 | | | | 14,426 | 11,734 | 100,539 | 52,980 | | 416,448 | | | | Per Acres Total Return | duc ti on | : (10) |
| •• | •• | •• | ** | ** | •• | ** | •• | •• | •• | •• | •• | : Do | Re | . Ne | : (11) |
| 40,898 | | | | 5,084 | 3,674 | 69, 264 | 32,326 | | 30,550 | | | Dollars | turn | ct | |
| | | | | | | - | | | | | | | | | |

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Farmsteads, farm roads, waste and non-agricultural

Parenthetical amounts are duplicated acreages.

Calculated from Columns 3 and 6; rounded to nearest unit

Calculated from Columns 3 and 10; rounded to nearest cent

Total area zone A reduced by 1,465 acres urban, 756 acres woodland not anticipated to be cleared, and 45,935 acres already drained, not requiring drainage or not anticipated to be drained.

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| 1 | | State: | Reach: | Project: | Basin: | |
|-----|----|------------------|----------|---------------|------------------|--|
| (0) | .; | Arkansas-Missour | S | Buffalo Ditch | St. Francis Rive | |

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT ZONE FOR DRAINAGE CALCULATIONS ONLY (Based on projected prices) SUMMARY - TABLE IV A

| - (M/M/- | A11 | (1) Soil Unit |
|--|--|--|
| Farmsteads, farm roads, waste an Parenthetical amounts are duplic Calculated from Columns 3 and 6; | Open land Crops Cotton Cottonseed Corn Soybeans Oats (Grain) Oats (Sup.Past.) Perm. Pasture Idle Other Idle TOTAL | : Land use and crop : distribution : |
| arm roads, waste and non-agricul amounts are duplicated acreages om Columns 3 and 6; rounded to | 14,210 12,789 5,059 (5,059) 2,015 4,115 718 (208) 499 383 1,421 14,210 5/ | $\begin{array}{c} (3) \\ 2/ \\ \text{Acres} \end{array}$ |
| waste and non-agricultural re duplicated acreages. 3 and 6; rounded to neare | Lbs Lint Ton Bu Bu Lbs Beef Lbs Beef | (4) Unit |
| non-agricultural ted acreages. rounded to nearest unit | 518 4658 50 50 25 145 | : (5) : Production :Per Acre: |
| unit | 2,618,205 2,356.38 101,064 103,752 31,748 30,160 197,105 | (6) Total |
| 1 | Dollars 25 63.00 1.45 2.30 90 2005 | Value of p |
| | Dollars 654,551 148,452 146,543 238,629 28,574 6,047 39,520 | ro |
| | Dollars 4/ 137.63 41.86 29.98 26.42 14.35 55.38 | (8) : (9) : duction : Cost of p |
| | Dollars Dollars 696,257:106,746 84,350:62,193 123,358:115,271 18,971:9,603 2,985:3,062 27,635:11,885 953,556:308,760 | : (10) : (11) production: Net e: Total : Return |
| | Dollars 106,746 462,193 115,271 9,603 3,062 11,885 | : (11) ion: Net |

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Total area zone A reduced by 1,465 acres urban, 756 acres woodland not anticipated to be cleared, and 45,935

acres already drained, not requiring drainage or not anticipated to be drained.

Calculated from Columns 3 and 10; rounded to nearest cent

Basin: St. Francis River
Project: Buffalo Ditch
Reach: 3
State: Arkansas-Missouri

SUMMARY - TABLE II B

ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS

COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1): (2): | (3) : (4) : (5) : (6) |
|--------------------------|--------------------------------|
| Seil: Land use and crop: | |
| Unit: distribution : | Acres : Unit : Per Acre: Total |
| : | : |
| All: Open land : | 6,137 : : : |
| : Crops : | 5,524 : 3/ : |
| : Cotton : | 1,998 :Lbs.Lint: 334 : 666,990 |
| : Cottonseed : | (1,998): Ton : 3004 : 600.29 |
| : Corn : | 821 : Bu. : 33 : 27,325 |
| : Soybeans : | 1,862 : Bu. : 19 : 36,199 |
| : Oats (Grain) : | 467 : Bu. : 24 : 11,389 |
| Perm. Pasture | 97 :Lbs.Beef: 180 : 17.460 |
| Idle | 279 |
| : Other 1/ | 613 : : : |
| :Woodland | |
| - | 647: Acres : |
| * TOTAL * | 6,784 |
| 1 1 | 3/1 |

1/ Farmsteads, farm roads, waste and non-agricultural 2/ Parenthetical amounts are duplicated acreages.

3/ Calculated from Columns 3 and 6; rounded to nearest unit 4/ Total area zone B reduced by 256 acres water.

Basin:
Project:
Buffalo Ditoh
Reach:
State:
Arkansas-Missouri

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS (Based on projected prices) SUMMARY - TABLE III B

| 1/ Farmsteads, farm roads, waste and non-apricultural | •• | * TOTAL | :Woodland | : Other 1/ | : Idle | : Perme Pasture | : Oats (Grain) | * Soybeans | : Corn | : Cottonseed | * Cotton | : Crops | All: Open land | 440 | Unit: distribution | Soil: Land use and crop | (1) : (2) | |
|---|-----|-----------------|-----------|------------|--------|-----------------|----------------|------------|--------------|--------------|-------------|---------|----------------|-----------|--------------------|-------------------------|----------------|--|
| ads waste a | •• | 6,340 5 | 1 | \$ 634 | 292 | 2 97 | : 346 | : 1,924 | 8 850 | : (2, 197) | : 2,197 | : 5,706 | \$ 6,340 | 9.9 | Acres | 2/ | 1 (3) | |
| nd non-agri | | •• | & Acres : | •• | •• | :Lbs.Beef : | * Bu. * | 8 Bu. 8 | : Bu. : | a .Ton : | :Lbs.Lint : | | •• | •• | * Unit : | -rd | 1 (4) : | |
| cultural | 0.0 | ₩ | • | •• | | 235 * | 32 . | 23 | 41 . | •3568 · | 396 | 3 | •• | •• | : Per · Acre: | Production | (5): | |
| | •• | •• | •• | •• | | 22,795 | 11,007 | 43,604 | 34,497 | .783.80 | 870,905 | • | | | Total : | | (6) | |
| | | •• | •• | •• | | 2005 | .90 : | 2.30 : | 1.45 : | 63.00 : | .25 : | | •• | Dollars ? | Per Unit : | | (7) | |
| | •• | 431,889 : | | | •• | 4,570: | 9,906; | 100,289: | 50,020: | 49,379 : | 217,725 : | | | Dollars. | Total a | 100 | (8) | |
| | •• | ••. | •• | •• | | 34.66 : | 19,93: | 28,19: | 34.37 : | •• | 106.55: | 4/: | •• | Dollars : | To Marie | Nost of pa | : (S) | |
| | | 327,792:104,097 | •• | | •• | 3,362 : | 6,895 : | 54,231: | 29,215 : | •• | 234,089 : | •• | - | Dollars : | Potal a | saost of production: | : (10) : | |
| | | 104,097 | | | | 1,208 | 3,011 2 | 46,058 | 20,805 | | 33,015 | | | Dollars | Return | Net | (11) | |

Farmsteads, farm roads, waste and non-agricultural

Parenthetical amounts are duplicated acreages.

Calculated from Columns 3 and 10; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent

Total area zone B reduced by 256 acres water and 444 acres woodland not anticipated to be cleared.

State: Reachs Project: Basin: Buffalo Ditch St. Francis River Arkansas-Missouri

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS (Based on projected prices) SUMMARY - TABLE IV B

| Ť | •• | | A. | **, | \$5 | 20 | 90 | 80 | ••, | •• | ** | •• | •• | All: | a . | Unit: | Soil: | \$ (T) | |
|--|------|-----------------|-----------|----------|---------------------------------------|---------------|-------------------|--------------|----------|--------|-----------------|--------------------------|-------------------|-----------|-------------------|--------------|--|--------|-----|
| Farmsteads, farm roads, waste and non-agricultural | | TOTAL | | Other 1/ | Idle | Permo Pasture | Oats (Sup. Past.) | Oats (Grain) | Soybeans | Corn | Cottonseed | Cotton | Crops | Open land | | distribution | Land use and crop | (2) | |
| pads | • | •• | *** | * | •6 | ** | •• | •• | • | | 88 21 | •• | 40 | •• | 40 | 40 | •• | •• | |
| waste a | L | 6,340 5 | | 634 | 170 | 97 | (40) | 346 | 1,924 | 850 | (2,319) | 2,319 | 5,706 | 6,340 | | Acres | 2 | (3) | |
| nd non-agr | 50 : | | a: Aores | • | • • • • • • • • • • • • • • • • • • • | *Lbs.Beef | :Lbs.Beef | . Bu. | . Bu. | s. Bu. | :: Ton | *Lbs .Lint | 9 · | •• | ** | : Unit | • | : (4) | 1 1 |
| icu | ** | | •• | •• | ** | * | •• | •• | ** | •• | : 04 | ** | | •• | ** | : Pe | Pro | ** | |
| ltural | , | •• | •• | •• | •• | 355 : | 115 : | 41 . | 26 8 | 50 : | £.4383 £ | 487 | 3/ | | ** | Per Acres | Production | (5) : | |
| | | | | | | | | | | | . 1,(| بر برو | 415 | • | | Total | | | |
| | | | | | | 34,435 | 4,600 | 14,342 | 49,199 | 42,625 | 1,016.44 | ,129,380 | | | | tal | | (6) | |
| v e . | •• | •• | •• | 80 | . . | 00 | ,* | | ** | | •• | •• | 66 6.07 | 90 7 e | : Do | Pe: | .Va | •• | |
| | | | | | | 2005 | 2005 | .90 | 2.30 | , 1.45 | 63,00 | •25 | | | ollars | Per Unit | lue of | (7) | |
| _ | ** | " | •• | | ; | •• | •• | • | * | •• | | •• | ** | .1 | • D | •• | o ra | •• | |
| | | 542,079 | | | | 6,904 | 922 | 12,908 | 113,158 | 61,806 | 64,036 | 282,345 | | ٠ | Dollars | Total | duction | (8) | |
| | •• | 1 | •• | •• | •• | •• | | ** | •• | ** | co | ** | ** | •• | • E | ; Pe | 2 C c | | |
| | •• | •• | | , ° | | 50,20: | 10.94: | 24.78: | 30.33: | 41.89 | •• | 128,93 | 4/ | •• | Dollars | :Per Acre: | st of r | (9) | |
| | | 406,844 135,235 | | | | 4,869 | 438 | 8,575 | | 35,605 | | 128,93: 298,999 : 47,382 | | | Dollars : Dollars | Total | alue of production : Cost of production: | (OT) | |
| | •• | 00 | 90 | •• | •• | ** . | ,•• | •• | •• | •• | •• | * | •• | •• | • | •• | n: | ** | |
| | | 35,235 | | | en : | 2,035 | 484 | 4,333 | 54,800 | 26,201 | | 47,382 | | , | Dollars | Return | Net | (11) | |
| - | : | | • | : | | | - | -20 |)4- | | | | 2 | | | | | - | |

Parenthetical amounts are duplicated acreages.

(जीक्रीक्री) Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent

Total area zone B reduced by 256 acres water and 444 acres woodland not anticipated to be cleared.

Basin:
Project:
Reach:
State:

Arkansas-Missouri

(1) : (2) :

REACH SUMMARY BY SOIL MAPPING UNITS

| - | | | | | - | - | - | | 1 |
|---------------|----------------|-------------------|-------------------------|--------------------|-------------|------------------------|--------------------|-----------|------------------|
| | 199,000 | 443,995 : 199,000 | 1,360,400 | : 1,804,395 | 244,995 | 923,919 | 1,168,914 | 20,550 | TOTAL : |
| | 31,138 | 135,235 | 406,844 | 542,079 | 104,097 | 327,792 | / 3 431,889 | 6,340 2/ | Subtotal : |
| 4 | 1,514 | 34,262 | 108,345 | 116,216 142,607 | 17,203 | 77,128 | 103,631 193,048 | 1,795 | 16 : |
| -205 | 12,565 | 72,956 : | : 210,300 | 283,256 : 210,300 | \$ 60,391 | 174,819 | : 235,210 | 3,366 | 4 |
| | 167,862 | 308,760 | 953,556 | : 1,262,316 | 1. 140,898 | : 596,127 | / ; 737,025 | 14,210 1/ | Subtotal : |
| | 140,117 | 14,578, | \$ 45,277 \$ 623,132 | 818,112 | 12,821 | 36,545 342,301 | 397,164 | 9,250 | 16 |
| | 25,988 | 99,202 | 4,349 : 285,147 | : - (no | 20NE A | : 217,281 | 1 290,495 | 4,374 | د |
| e in ction | Net Production | Net . | (Production in Dollars) | Gross | Net | (Production in Dollars | g (Pross | Acres | Soil : Unit : |
| | (9) | ot (8) . : | Future With Project | : .(6) Futu | Project (5) | Future Without Project | : (3) : Futu | (2) | (1) |

Total area zone A reduced by 1,465 acres urban, 756 acres woodland not anticipated to be cleared, and 45,935 acres already drained, not requiring drainage or not anticipated to be drained. Total area zone B reduced by 256 acres water and 444 acres woodland not anticipated to be cleared.

| 2/2/ | | 3 | The state of the s | | * | =(| , t | in the same | A | Zone | (1) | Basin: Project: Reach: State: |
|--|-------------|------------------|--|-------------------|-------------------|-------------|------------------------------------|-------------------|-----------------------|-------------------|--------------|--|
| Does not include 10 percent "other" Includes engineering and contingency | TOTAL | Subtotal | :16 - General crops | 4 - General crops | 3 - General crops | *Subtotal | 16 - General crops 16 - Pasture | 4 - General crops | 3 & General crops | Soil mapping unit | (2) | St. Franci,s River Buffalo Ditch 3 Arkansas-Missouri |
| 10 percent "other" land ing and contingency | : 16,212 1/ | 3,423 <u>1</u> / | 911 | 636 | * 1,818 | : 12,789 1/ | * 7,826 * 499 | 527 | Acres 3,937 | | (3) | A) |
| 3/ Amortized | 235,772 | 52,504 | 12,116 | 8,458 | 31,458 | 183,268 | 104,078 | 7,008 | Dollars 68,121 | *Installation 2 | (4) Total | TA |
| | 22,714 | 5,058 | 1,167 45 | 815 | 3,031 | 17,656 | 10,027 | 675 | Dollars 6,563 | , Eg | : (5) | TABLE VII ANALYSIS OF FARM DRAINAGE SYSTEM COSTS |
| over 15 years at 5 percent | 30,617 | 7,225 | 1,398 11 | 976 | 4,840 | 23,392 | 12,009 94 | 809 | Dollars 10,480 | : Ma | : Annual | COSTS |
| | 53,331 | 12,283 ···· | 2,565 56 | 1,791 | 7,871 | 41,048 | 22 485 485 | 1,484 | : Dollars : 17,043 | Annual Cost | (7) | ٠ |

Basin: Project: Reach: State: St. Francis River
Buffalo Ditch
3
Arkansas -Missouri

TABLE VIII
ANALYSIS OF GROUP DRAINAGE NEEDS AND COSTS

| | | | : Unit : | Total | | | |
|------------------------------|-----------------|---------|---------------|-----------|--|--|--|
| Item. | : Unit | Amount | • | Cost | | | |
| 200 | | | Dollars | | | | |
| Excavation 1/ | : | | : | | | | |
| Spreading spoil 1/ | : | | : | | | | |
| Clearing right-of-way | Cubic Yard | 302,400 | 1 0.20 | 60,480 | | | |
| Right-of-way easements | Aofes . | 110 | : 30.00 | 3,300 | | | |
| | : | 2 | 8 | | | | |
| Crossings | : Each | 20 | : 400.00 | 8,000 | | | |
| Swinging water gaps | : Each | 20 | 50.00 | 1,000 | | | |
| ournerne acon Paho | . Daon | : | : | 2,000 | | | |
| Pipe drop structures | : Each | 8 | 200.00 | 1,600 | | | |
| D3 | 3 | | 100.00 | . 900 | | | |
| Flap gates | : Each | 8 | : 100.00 | 800 | | | |
| Vegetative plantings | 1 Aores | 156 | : 8.00 | 1,248 | | | |
| | 1 | 1 | : | | | | |
| Total construction cost | | | : | 76 400 | | | |
| local construction dost | \$ XX | t XX | t XX | 76,428 | | | |
| Engineering cost | s xx | xx | : XX | 7,643 | | | |
| | | • | : | | | | |
| Contingencies and legal | * ** | XX. | : XX | 7,643 | | | |
| | | | 1 | | | | |
| Total installation cost | • | | | 91,714 | | | |
| | | | | | | | |
| Annual equivalent - installa | | | | 4 000 | | | |
| (amortized for 30 years at | og percent) | | | 4,986 | | | |
| Annual maintenance cost | | | | | | | |
| | | , | | 3,821 | | | |
| Annual loss of production - | right-of-way | 2/ | | 322 | | | |
| Total annual cost of requir | ed group facili | ities | | 9,129 | | | |
| The second of todatt | or Front ractr. | - VI OU | | O B T C O | | | |

^{1/} These items included in excavation costs under normal contract procedures.

2/ Annual loss of production - right-of-way. 27 acres @ \$11.92 per acre.

Basin: St. Francis River
Project: Buffalo Ditch
Reach: 3
State: Arkansas-Missouri

TABLE IX
SUMMARY OF ANNUAL NET PRODUCTION RETURNS
AND ASSOCIATED COSTS

| - | | | 2004 | ** |
|-----|--|--------------|---|---|
| | (1) | \$ 12 m | | : (3) :Discounted :Amount |
| | | 1 | | |
| | A Company of the Comp | : : | NAME. | : Dollars |
| 1. | Net return with project | 1 ; | 443,995 | 2 XX 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 |
| 2. | Net return without project | 1 | 244,995 | : XX |
| 3. | Gross benefit to project | | 199,000 | 123,623 2/ |
| 1 | Farm drainage cost | ÿ | xx | * mg 1/8 / 11 / 11 |
| 4. | | | | : xx 2/ |
| ٠,٠ | a. Installation cost | t , ; | 22,714 | s xx |
| | b. Maintenance cost: | 1 - | 30,617 | : XX |
| | c. Total | : | 53,331 | : 33,130 |
| 5. | Group drainage cost | 3 ; | XX , , | : xx 3/57 |
| | a. Installation cost | 2 , | 4.986 | : XX |
| | b. Maintenance cost 1/ | Tarage de la | 4.143 | Balance and the second of the |
| | c. Total | | 9,129 | 7,581 |
| | i total | • | 39123 | *** ********************************** |
| 6 | Conversion cost | | WW. | * *** 1 / |
| 0. | | • ; | XX | xx 4/ |
| | a. Installation cost | \$ | | : XX |
| 30 | b. Maintenance cost | \$; · | · · · · · · · · · · · · · · · · · · · | * xx |
| | c. Total : | \$; | <u>.</u> | : |
| | 10 de | Ledro e | The British St. | Table reports on the same |
| - | | - | | |

Includes loss of production, right-of-way

| Discounted at 5 percent to account for estimated 20 year lag to full installation, maintenance, and benefit accrual.
| Discounted at 3 percent to account for estimated 10 year lag to full installation, maintenance, and benefit accrual.
| No conversions; no table VI required.

Project: Honey Cypress Ditch State: Arkansas & Missouri

TABLE L
PRESENT LAND USE

| | :Soil map- | : Open | :Wooded | : Urban | : Water | : Total |
|---------------|--------------|------------|---|------------|------------|----------|
| Zone | :ping unit | | :(Acres) | : (Acres) | :(Acres) | :(Acres) |
| 20110 | obany arm | • (110100) | • (110100) | • (210105) | • (210202) | • |
| _ | * | • • • • • | • | | • | 0 01/ |
| Zone A | : 3 | : 3,328 | : 18 | \$ ···· • | : - | : 3,346 |
| | : 12 | : 11,229 | : 9 | | g: | : 11,238 |
| | : 16 | : 10,713 | : 9 | · · | 2 - | : 10,722 |
| | | 1 103117 | | | | |
| | | | • | • | | • |
| Subtota] | l - all soil | s 25,270 | : 36 | : - | : . | : 25,306 |
| Urban | | : - | : - | : 249 | | : 249 |
| Water | | | | | | |
| | Zama A | 25 270 | 26 | 249 | | מר בבר |
| Total- 2 | lone A | : 25,270 | : 36 | : 249 | | 25,555 |
| | • | 3 | : | • | : | • |
| Zone B | : 3 | : 669 | : 122 | : • | : ~ | : 791 |
| | : 12 | : 9 | 2 | : - | : | 9 |
| | : 16 | 455 | | | | 455 |
| | • 10 | • 422 | | | | 422 |
| | | : | : | : | : | : |
| Subtota] | - all soils | : 1,133 | : 122 | : - | : - | : 1,255 |
| Urban | | | | | | -3-77 |
| Water | | | . 7 | • | . 70 | . 50 |
| | | - | | | : 70 | : 70 |
| Total - | Zone B | : 1,133 | : 122 | : - | : 70 | : 1,325 |
| | | : | : | : | : | : |
| GRAND TOTAL - | Project | : 26,403 | : 158 | : 249 | : 70 | 26,880 |
| | -10000 | • | • | | | . 20,000 |
| A-1 | | • | - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 | o • ., | • | • |

SUMMARY - TABLE II A ZONE FOR DRAINAGE CALCULATIONS ONLY COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| 100000 | | ** ** ** ** ** ** ** ** ** ** ** ** ** | |
|--------|---------------------|--|-------------|
| (1) | (2) | (4) : (5) : (6) | |
| Soil | : Land use and crop | : 2/: Production | es er i dro |
| Unit | a distribution | : Acres : Unit : Per Acre: Total | - |
| | • | | - |
| All | Open land | 14,001 | |
| | : Crops | : 12,601 : 3/: | |
| _ t | : Cotton | : 4,344 : Ibs. lint : 262 : 1,139,26 | 50 |
| , , | : Cottonseed : | :- (4,344) : Ton : 2360 : 1,025.3 | |
| | : Corn | 2,016 : Bu. : 25 : 50,47 | 79 |
| | : Soybeans | 3,996 : Buo : 16 : 62,05 | 32 |
| | : Oats (Grain) | : 1,171 : Bu. : 19 : 22,51 | 18 |
| | : Perm. Pasture | 576 :Lbs.Beef : 180 : 103,68 | |
| ; | : Idle | 498 : | ~ |
| 1-2 | : Other 1/- | 1,400 | |
| * > 6, | : Woodland | 27 Acres | |
| | | 4 | |
| | : TOTAL | : 14,02847: 4 | |
| - | \$ 100 m | | |

1/ Farmsteads, farm roads, waste and non-agricultural 2/ Parenthetical amounts are duplicated acreages

3/ Calculated from Columns 3 and 6; rounded to nearest unit
1/ Total area Zone A reduced by 249 acres urban and 11,278 acres
already drained or not requiring drainage.

SUMMARY - TABLE III A

PRODUCTION COSTS AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE CALCULATIONS ONLY (Based on projected prices,

| : TOTAL | : Other 1/ | Soybeans Oats (Grain) Perm. Pasture | crops Cotton Cottonseed Corn | All : Open land | (1): (2) Soil: Land use and crop Unit: distribution |
|------------------|------------|---|------------------------------|-----------------|--|
| 8,214 <u>5/</u> | 821 | 2,343 104 104 104 104 104 104 | 2,833 (2,833) 1,182 | : 8,214 | (3) 2/ |
| • | Acres | Bu. Bu. Lbs.Beef | :Lbs.Lint Ton Bu. | •• •• | (4) |
| •• •• | •• •• • | 17 22 195 | 275 2477 277 | | : (5) : Production :Per Acre: |
| | | 39,142 8,974 66,885 | 779,580 701.62 31.632 | | (6) |
| • | | 2,30 | 63.00 | Dollars | : (7) : (8) :Value of production :Per Unit : Total |
| 396,478 | | 90,027 8,077 13,410 | 194,895 | Dollars | : (8) production Total |
| | | 23.33 | •• •• •• | Dollars | : (9) : (10) :Cost of product :Per Acre: Total |
| 326,059 : 70,419 | | 54,653 6,324 9,707 | 226,368 | Dollars | ion |
| 90,419 | | 35,374 1,753 3,703 | 12,729 | Dollars | (11) Net Return |

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Farmsteads, farm roads, waste and non-agricultural

Parenthetical amounts are duplicated acreages

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent Total area Zone A reduced by 249 acres urban, 27 acres woodland not anticipated to be cleared,

and 17,065 acres already drained, not requiring drainage or not anticipated to be drained.

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE CALCULATIONS ONLY (Based on projected prices) SUMMARY - TABLE IV A

| All | |
|---|---------|
| Open land Crops Cotton Cottonseed Corn Soybeans Oats (Grain) Oats (Sup. Past.) Perm. Pasture Idle Other 1/ Woodland TOTAL | : (2) |
| Acres 2,393 2,900 (2,900) 1,182 2,343 404 (143) 343 221 8,214 5/ | (3) 9/ |
| Unit Lbs Lint Ton Bu Bu Lbs Beef Lbs Beef | (t) |
| Fer Acre 518 4663 49 25 44 145 145 | e (5): |
| Total 1,502,370 1,352.13 57,966 57,945 17,776 20,735 135,485 | (6) |
| Per Unit Total Dollars Dollars 63.00 85,185 1.45 84,051 2.30 133,273 2005 15,999 2005 27,165 725,422 | (7) |
| Total Total Dollars 375,592 85,185 84,051 133,273 15,999 4,157 27,165 | (8) |
| Per Acre: Total Retu Dollars: Dollars: Doll 136.86: 396,888: 63 136.86: 396,888: 63 141.11: 48,592: 35 29.54: 69,215: 64 26.52: 10,714: 5 13.89: 1,986: 2 54.08: 18,549: 8 54.08: 545,944: 179 | ; (9) ; |
| Total :Return Dollars :Dollars 396,888 : 63,889 48,592 : 35,459 69,215 : 64,058 10,714 : 5,285 1,986 : 2,171 18,549 : 8,616 | (OT) |
| Return Dollars 63,889 64,058 5,285 2,171 8,616 | (E) |

Farmsteads, farm roads, waste and non-agricultural

Parenthetical amounts are duplicated acreages

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent

Total area Zone A reduced by 249 acres urban, 27 acres woodland not anticipated to be cleared, and 17,065 acres already drained, not requiring drainage or not anticipated to be drained.

SUMMARY - TABLE II B ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1) | : (2) :Land use and crop : distribution | (3) | : (4) : (5) : (6) |
|------|---|-----------------------------------|--|
| Soil | | : 2/ | : Production |
| Unit | | : Acres | : Unit :Per Acre : Total |
| All | : Cotton : Cottonseed : Corn : Soybeans : Oats (Grain) : Perm. Pasture : Idle : Other 1/ : Woodland | : (359) : 163 : 335 : 84 | Bu 32 5,247 Bu 6,125 Bu 22 1,890 Lbs Beef: 180 4,500 |

Farmsteads, farm roads, waste and non-agricultural Parenthetical amounts are duplicated acreages Calculated from Columns 3 and 6; rounded to nearest unit Total area Zone B reduced by 70 acres water

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS

(Based on projected prices)

| | | | | | LLV | Soil | E |
|----------------|------------|--------------------------------|------------------------|-----------------|------------------|---------------------------------------|-------|
| : TOTAL | : Other 1/ | : oats (Grain) : Perm. Pasture | : Cottonseed : Corn | : Crops | : Onen land | : Land use and crop : distribution | : (2) |
| 1,194 5/ | 119 | | : (400) : 172 | 1,075 | : (0[.[. | Acres | (3) |
| | Acres | Bu. Lbs Beef | Fon Bu. | :Lbs.Lint | | : Unit | (4) |
| | 40 00 00 | 25.27 27.77 27.71 | : 3375 : 39 | 375 3/ | | :Per Acre: | : (5) |
| 4 9 9 | * . | 2,068 5,875 | \$75.00 \$75.00 | 149,995 | | Total | (6) |
| | | 2005 | - 63 - 145 - 150 | 25 | Dollars | Per Unit | 3 |
| 75,702 | | 1,862 | 9,779 | 37 , 498 | Dollars | Unit: Total | - 1 |
| • | •• •• •• | 19,57 | 33,42 : | 700.55 | :Dollars | :Per Acre: Total :Retu | : (9) |
| 57,690 :18,012 | 90 04 0 | 1,311 | 5,749 | կ0,382 | Dollars :Dollars | Total : | (OL) |
| 18,012 | | 350 | 4,030 | 5,621 | Dollars | Return | (EL) |

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Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent Farmsteads, farm roads, waste and non-agricultural
Parenthetical amounts are duplicated acreages Total area Zone B reduced by 70 acres water and 61 acres woodland not

anticipated to be cleared.

State: Arkansas & Missouri Project: Honey Cypress Ditch Basin: St. Francis River

SUMMARY - TABLE IV B

PRODUCTION COSTS AND NET RETURNS: COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS (Based on projected prices)

| · | | LILA | Soil Unit |
|-----------------------|--|-------------|--|
| H Q. | Crops Cotton Cottonseed Corn Soybeans Oats (Grain) Oats (Sup. Past.) Perm. Pasture | : Open land | : (2) : Land use and crop : : distribution |
| 32 119 19 19 | 25. (11) (426) (426) (426) | 1,194 | (3) Acres 2/ |
| Acres | Lbs.Lint Ton Bu. Bu. Lbs.Beef Lbs.Beef | •• | (4) Unit |
| 00 00 00 00 00 | 725 725 725 7435 7481 7481 | | : (5) Production :Per Acre: |
| | 206,110 185.50 8,618 8,788 2,793 1,375 9,250 | | (6) Total |
| in in the second | 2005 2005 2005 2005 2005 2005 2005 | Dollars | : (7) :Value of J :Per Unit |
| 100,566 | 51,527 11,686 12,496 20,212 2,514 2,855 | Dollars | : (8) production : Total |
| | 127 12 12 00 12 00 12 00 | : Dollars | : (9) :Cost of p :Per Acre |
| 74,927 :25,639 | 54,152 7,224 10,467 1,683 128 | Dollars | : (9) : (10) : :Cost of production:Per Acre: Total |
| 25,639 | 5,272 5,272 831 148 148 148 | Dollars | (11) Net Return |

Total area Zone B reduced by 70 acres water and 61 acres woodland not anticipated Calculated from Columns 3 and 10; rounded to nearest cent Calculated from Columns 3 and 6; rounded to nearest unit Parenthetical amounts are duplicated acreages Farmsteads, farm roads, waste and non-agricultural

to be cleared.

TABLE V PROJECT AREA SUMMARY BY SOIL MAPPING UNITS

| (2) (3) (4) (5) (6) (7) (8) (9) Future Without Project Future With Project (Production in Dollars) Difference in Gross Cost Net Gross Cost Net Cos | TOTAL | Subtotal | 5 3 | | Subtotal | 16 | | Soil Unit | (T) |
|--|---------|----------|------------------|----------------|-----------|--------------------|-------------|------------------------------|-------------------|
| ### (4) | 9,408 | 1,194 2/ | 730 464 | | 8,214 1 | 1,864 | | Acres | (2) |
| (5) (6) : (7) : (8) : (9) t | 472,180 | 75,702 | 51,616 24,086 | | 396,478 | 123,814 272,664 | • | (Produ | (3) Futu |
| (5) (6) : (7) : (8) : (9) t | 383,749 | 57,690 | 38,161 | | 326,059 | 92,148 233,911 | | ction in Dol. | (l ₁) |
| (6) | 88,431 | 18,012 | 13,455 | ZÒNE B | 70,419 | 31,666 38,753 | | | roject |
| oject ollars)- ollars)- ling) ing) 12,863 ll,197 l44 l136,615 l97,862 l44 l179,478 l09,059 l61 l6,152 l9,487 l9,930 l66 l9,487 l9,930 l71 l9,686 l16,686 | 825,988 | 100,566 | 62,013 38,553 | (subject to fl | 725,422 | 163,763 561,659 | | (Producti | (6) |
| (8) (9) Difference in Net Net Production 12,863 11,197 36,615 97,862 79,478 109,059 16,152 2,697 9,487 4,930 25,639 7,627 05,117 116,686 | 620,871 | 74,927 | 45,861 29,066 | ooding) | 545,944 | 120,900 | o flooding) | on in Dollar Cost | (7) With Project |
| (9) Difference in Net Production 11,197 97,862 109,059 2,697 4,930 7,627 116,686 | 205,117 | 25,639 | 16,152 | | : 179,478 | 136,615 | | Net | : (8) |
| | 116,686 | 7,627 | 2,697 4,930 | | | 11,197 | | Difference in Net Production | (9) |

cleared, and 17,065 acres already drained, not requiring drainage or not anticipated to be drained.

2/ Total area Zone B reduced by 70 acres water and 61 acres woodland not anticipated to be cleared. Total area Zone A reduced by 249 acres urban, 27 acres woodland not anticipated to be

= 216

ANALYSIS OF FARM DRAINAGE SYSTEM COSTS

| Does not 2/ Includes 3/ Amortized | | | 15,111 | В | | | A | | Zone |
|---|-------------------|------------|---|---------------------|------------|--------------------------------------|---------------------|---------|--|
| Does not include 10 percent "other" land Includes engineering and contingency Amortized at 5 percent over 15 years. | TOTAL | : Subtotal | :16 - General crops :16 - Pasture | : 3 - General crops | : Subtotal | :16 - General crops :16 - Pasture | : 3 - General crops | | : Soil mapping unit : and land use |
| r" land ncy ars. | 8,057 <u>1</u> /: | . 不 199 | 267 · · · · · · · · · · · · · · · · · · · | 380 | 7,393 1/: | 5,372 343 | 1,678 | Acres | Area |
| | 113,532 | 10,264 | 3, 550 | 6,576 | 103,268 | 71,443 2,791 | 29,034 | Dollars | Total Cost Installation |
| | 10,938 | 989 | ن عالد عالد | 634 | 9,949 | 6,883 | 2,,797 | Dollars | Annual Fquivalent 2/:Instl. Cost 3/ |
| | 14,199 | 1,425 | , L ₁ 10 | 1,012 | : 12,774 | 8,243 64 | 4,467 | Dollars | Annual Maintenance Cost |
| | 25,137 | 2,414 | 752 | 1,646 | 22,723 | 15,126 | 7,264 | Dollars | Total Annual Cost |
| | | | | | מדר | | | | • |

TABLE VIII
ANALYSIS OF GROUP DRAINAGE NEEDS AND COSTS

| Item | : Unit | : Amount | : Unit | : Total : Cost |
|----------------------------|-----------------|----------|-----------|----------------|
| Toen | 9 | : | : Dollars | |
| Excavation 1/ | • | | : | : |
| Spreading spoil 1/ | | : | : | : 5 0/0 |
| Clearing right-of-way 1 | :Cubic Yard | : 39,800 | : 0.20 | 7,960 |
| Right-of-way easements | : Acres . | 13 | 30.00 | 390 |
| Omeganinus | Each | :). | 200.00 | : 7 200 |
| Crossings | : Each | : 4 | : 30000 | 1,200 |
| Swinging water gaps | : Each | : 4 | : 40.00 | 160 |
| Pipe drop structures | Each . | : : 3 | 200°C | : 600 |
| Tipe drop sorucoures. | · Each | · ;) | : 200600 | : |
| Flap gates | : Each | : 4 | : 100.00 |): 400 |
| Vegetative plantings | : Acres | 26 | : 8,00 | 208 |
| | : | : | : | : |
| | * * * * | • ,] | : | : |
| Total construction cost | : XX | : XX | · XX | :10,918 |
| Engineering cost | : xx | xx | · xx | : 1,092 |
| Continuous on and laus! | • | : | | . 7 000 |
| Contingencies and legal | : XX | : , XX | : XX | : 1,092 |
| Total installation cost | | | | :13,102 |
| TO GAT THIS DATE OF COST | | •• | | : 2016 |
| Annual equivalent - instal | | 1 | | : |
| (amortized for 30 years a | t 3½ percent) | i. T | . , > | : 712 |
| Annual maintenance cost | | · · | | : 546 |
| N. W. W. Santa | | 1.01 | | : |
| Annual loss of production | right-of-way | 2/ | | : 38 |
| Total annual cost of mouri | 3 | | | • |
| Total annual cost of requi | red group fact. | Litles | | : 1,296 |

^{1/} These items included in excavation costs under normal contract procedures.

^{2/} Annual loss of production - right-of-way. 4 acres @ \$9.40 per acre.

TABLE IX SUMMARY OF ANNUAL NET PRODUCTION RETURNS AND ASSOCIATED COSTS

| 1. 2. 3. | (1) Item Net return with project Net return without project Gross benefit to project | | (2) Total Dollars 205,117 88,431 116,686 | : (3) : Discounted : Amount : Dollars : xx : xx : 92,498 2/ |
|----------|--|------|---|---|
| 40 | Farm drainage cost a. Installation cost b. Maintenance cost c. Total | | xx 10,938 14,199 25,137 | : xx 2/ : xx : xx : 19,926 |
| 5. | Group drainage cost a. Installation cost b. Maintenance cost 1/ c. Total | * | xx 712 584 1 , 296 | xx 3/ xx xx 1,076 |
| 6. | Conversion cost a. Installation cost b. Maintenance cost c. Total | r, y | ×xx ⊶ ⊷ | xx = xx /1/ |

No conversions; no table VI required.

^{1/} Includes loss of production, right-of-way
2/ Discounted at 5 percent to account for estimated 10 year lag to full installation, maintenance, and benefit accrual.

³/ Discounted at $3\frac{1}{2}$ percent to account for estimated 10 year lag to full installation, maintenance, and benefit accrual.

Basin: Project: Reach: State: St. Francis River
Cockle Burr Slough Ditch
I
Arkansas

TABLE I COMMON TABLE IN ESENT LANDOUSE

| | • | 2 CM 4 | | |
|------------------|--|-------------------|----------------------|-----|
| 4* | :Soil map -: Open | :Wooded : Ur | ban : Water : Tot: | al |
| Zone | :ping unit: (Acres | | res): (Acres): (Acre | es) |
| , _,_ | : | | - : | |
| one B | : 4 : 200 | 1 400 to 1 | = 1 200 |) |
| | : 12 : 29 | | ≥ 1 the ≥ 25 | 9 |
| | 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - | : " | | |
| Subtotal - all a | soils : 229 | 1 - 1 | - 229 | 9 |
| Jrban | e de la companya de l | : - 6 - 4 | | |
| Vater | | i distribution di | - : - | |
| Total - Zone B | 229 | - 1 | - : 229 | 9 |
| | | | | |
| one C | : 1 : 22 | : 45 : | - : - : 6' | 7 |
| | : 4 : 95 | | - : 9 | 5 |
| 202 | **** | | | |
| Subtotal - all s | soils : 117 | : 45 | - : - : 16: | 2 |
| Irban : | | * . . | | |
| later | | | : 19 : 19 | 9 |
| Cotal - Zone C | 1 117 | : 45 : | 19 : 18 | 1 |
| RAND TOTAL - Res | ach 1 : 346 | 45 | 19 : 410 | 0 |
| | • • | | | |

Manual Control of the Control

TABLE II B 1/
ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS
COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1) :· | (2) : Land use and crop : | (3) | : (4) : | (5): | (6) |
|--------|------------------------------|-------|------------|-----------|--------|
| Unit: | distribution : | Acres | | Per Acre: | Total |
| 3 | | | : : | : | |
| 4 1 | Open land : | 229 | 1 1 | : | |
| | Crops : | 206 | : : | : | |
| 0 | Cotton | 66 | :Lbs.Lint: | 405 : | 26,730 |
| 8 | Cottonseed : | (66) | : Ton : | .3645 : | 24.06 |
| | Soybeans : | 72 | : Bu. : | 25 : | 1,800 |
| 8 | Oats (Grain) | 19 | : Bu. : | 33 : | 627 |
| | Grain Sorghum : | 12 | : Bu. : | 20 : | 240 |
| 8 | Perme Pasture : | 8 | :Lbs.Beef: | 180 : | 1,440 |
| | Idle : | 29 | : : | : | |
| | Ctter 2/ : | 23 | : : | : | |
| :1 | Woodland : | - | : Acres : | : | |
| | TOTAL : | 229 | : : | : | |
| | 1 | | : : | : | |

^{2/} One soil only; no summary required
2/ Farmsteads, farm roads, waste and non-agricultural
3/ Parenthetical amounts are duplicated acreages.

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION TABLE III B 1/
ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS (Based on projected prices)

| مال | 1 | | | | | | | | | | | | 4 | | Unit | Soil | Ξ | | |
|------------------------------------|--------------|----------------|-----------|------------|-----------|-------------------|-------------------|---------------|--------------|-----------------|---------------|--|-------------|-------------------|------------------|---|---------------|---|--|
| One soil only; no summary required | | TOTAL : | *Woodland | * Other 2/ | : Idle :: | : Perm. Pasture : | : Grain Sorghum : | : Soybeans | s Corn s | s Cottonseed s | * Cotton * | s Crops s | open land : | 60 | e distribution : | : Land use and crop : | : (2) : | | |
| no summary required | | 229 | 1. | 23 | 21 | | 21 | 76 | 10 | (72) | 72 | 206 | 229 | 31 | Acres | 3 | (3) | 375 | |
| · | | and the | a Acres | •• | .•• , | *Lbs.Beef | * Bu. | : Buo | 8. Bu. | Ton | *Lbs.Lint | •• •• •• •• •• •• •• •• | •• | | 3 Unit | ** | 1 (4). | ** ** | 5-20- |
| | •• | | | *** | | 265 : | 25 | 29 | 49 | * .4185 * | 465 | 4/: | | 40 | :Per Acre: | Production. | : (5). | 00 TO T TO TO THE TOTAL THE | |
| | * | • | | | | 1,590 | | 2,204 | 490 | 30.13 | 33,480 | ₁ | | 4 | Total. | 1 | . (6) | 4 ma - 4 m | Total and I |
| | | | | ** | | 2005 | 1.53 | \$ 2.30 · | 1.45 | \$ 63,00 | 25 | •• | ** | :Dollars | *Per Unit : | :Value of | : (7) | | The state of the s |
| | | 17.169 | •• | •• | | : 319 | : 803 | 5,069 | 1 710 | 1,898 | 8 ,370 | | | : Dollars | : Total | Value of production : Cost of production: Net | : (8) | | ,/ |
| | o a , | •• | •• | •• | •• | : 36,86: | : 22,13; | : 33.06: | 1.43 | •• | : 120°77: | •• | •• | :Dollars :Dollars | :Per Acre: Total | :Cost of p | : (9): | | |
| | | 12.308 : 4.861 | | | | 221 | 465 | 2,513 | 414 | | 8,695 | | | | | roduction | (10) | | |
| | | 4.861 | •• | •• | 99 | 98 | 338 10 | 2 ,556 | 296 | •• | 1,573 | •• | | :Dollars | Return | Net | (11) | | |
| | | | | | | 46 | 1 60 | - | | | | | | | | | | | |

Parenthetical amounts are duplicated acreages. 20c09 percent cropland drained

Farmsteads, farm roads, waste and non-agricultural

Basin: St. Francis River
Project: Cockle Burr Slough Ditch
Reach: Arkansas

(1): (2) : (3)

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT (Based on projected prices) COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION TABLE IV B 1/
ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS

| | | | | | | - | | | | * | | Unit : | Soil : | (1) |
|----------------|-----------|---------|--------|---------------|----------|----------------------|------------|------------------|--------|-----------|--------------------|--------------|---|---------|
| TOTAL | Wood land | other 2 | : Idle | Grain Sorghum | Soybeans | Corn | Cottonseed | : Cotton | Crops | Open land | | distribution | Land use and crop | (2) |
| •• •• | •• | ** | •• | •• | •• | 90 | ** | 09 | •• | •• | •• | ** | ** | •• |
| 229 | | 23 | 8 | 10 | 83 | 10 | (95) | 95 | 206 | 229 | | Acres | 3/ | (3) |
| •• •• ' | * Acres | 40 | •• | Bu. | * Bu. | * Bu. | * Ton | *Lbs .Lint | •• | •• | •• | * Unit | •• | : (4) |
| 00 00 | •• | •• | •• | : 25 : | : 29 : | 2 57 2 | 1,4860 1 | : 540 : | 2 4/ 8 | •• | •• | :Per Acre: | Production | : (5) : |
| | | | | 250 | 2,407 | 570 | 46.17 | 51,300 | | | | Total | | (6) |
| 00 00 | •• | •• | •• | 1,53 | 2.30 | 1.45 | : 63,00 | . 25 | •• | 0.0 | Dollars | Per Unit | Walue of | : (7) |
| . 22,478 | | •• | •• | : 382 | 5,536 | 826 | 2,909 | : 12,825 | •• | •• | : Dollars | : Total | Walue of production : Cost of production: Net | * (a) |
| | •• | | •• | r 22,13, | : 33,06; | : 47.71: | •• | : 141.74: | •• | •• | :Dollars : Dollars | :Per Acre: | *Cost of p | : (9): |
| 16,907 : 5,571 | ** | | | 0 0 | 2,744 : | 477 . | | 141.74: 13,465 : | •• | •• | Dollars : | Total : | roduction: | (10): |
| 5,571 | | | | 161 | 2,792 2 | 349 | , | 2,269 | | | Dollars | Return | Net | (11) |

One soil only; no summary required

Farmsteads, farm roads, waste and non-agricultural

Parenthetical amounts are duplicated acreages.

79.91 percent cropland drained

St. Francis River Basin: Project: Cockle Burr Slough Ditch Reach: State: Arkansas

TABLE II C 1/ ZONE OF NO PROJECT BENEFIT COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1) Soil | : (2) : Land use and crop | : (3) : | (4) | : (5) : Production | (6) |
|-------------|------------------------------------|--------------------|------------|-----------------------|--------------|
| Unit | : distribution | Acres | Unit | :Per Acre: | Total |
| 4 | : Open land : Crops | : 117 : : 105 : | | 1 | |
| | : Corn : Soybeans : Idle | 21 : 42 : 42 : | Bu. Bu. | 25 : | 903 1,050 |
| | : Other 2/ :Woodland : TOTAL | 12 22 139 3/ | Acres | | |
| - | : | <u> </u> | 1 | : | |

One soil only; no summary required
Farm roads, waste and non-agricultural
Total area zone C reduced by 19 acres water and 23 acres woodland
not anticipated to be cleared

PRODUCTION COST AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION, (Based on projected prices) TABLE III C 1/2/ ZONE OF NO PROJECT BENEFIT

| •• | * TOTAL | | : Other 3/ | : Idle | s Soybeans | * Corn | a Crops | 4 : Open land | •• | Unit : distribution | Soil : Land use and crop | |
|----|-----------------|---------|------------|-------------|---------------|-----------------|---------|---------------|---------------------|---------------------|---|--------------|
| •• | : 139 4/ | * | 1. 14 | * 50 | * 50 | * 25 | : 125 | 1 139 | •• | n * Acres | crop : | t (3) |
| •• | 4/: | a Acres | •• | •• | : Bu. : | Bu. | •• | •• | 40 | g Unit | •• | : (4) : |
| •• | ••• | •• | •• | •• | 29 1 | 46 * | •• | •• | •• | Per Acres | Production | : (5) : |
| •• | •• | •• | 4. | •• | 1,450 : | 1,150 : | •• | •• | : Do J | Total :Per | *Va] | (6) : (7) |
| | 5, | •• | •• | •• | 2.30 : 3, | 1.45 : 1, | •• | •• | Dollars : Dollars | Per Unit: Total | ue of produ | 7) : (8) |
| •• | 5,002 1 | •• | •• | •• | 3,335 : 33.06 | 1,667 : 38,64 | •• | •• | ars :Dollars | al :Per Acre : | Walue of production: Cost of production : |) : (9) |
| •• | : 2,619 : 2,383 | •• | •• | •• | 06 : 1,653 | 34 1 966 | •• | •• | : Dollars : Dollars | e : Total | production | : (10) |
| •• | 2,383 | •• | •• | •• | 1,682 ° | 70125 | • 9 | •• | : Dollars | * Return | * Net | : (11) |

One soil only; no summary required Data same for"Future Without" and Future With" conditions; no Table IV C required

Farm roads, waste and non-agricultural

Total area zone C reduced by 19 acres water and 23 acres woodland not anticipated to be cleared.

| • | State: | Reach: | Projects | Basin: |
|---|----------|--------|--------------------------|----------------|
| | Arkansas | - | Cockle Burr Slough Ditch | St. Francis Ri |
| 3 | | | ough Ditch | River |

TABLE V
REACH SUMMARY BY SOIL MAPPING UNITS

| 1/ Tc | TOTAL : | # > | Unit : | Soil : | | (1) |
|--|-------------------|--|------------------|------------------------|------------------------|-------|
| otal area z | 368 1/ | 368 | Acres | a* | | (2) |
| ones B | 1 | •• | ca | •• | ** | •• |
| and C r | 22,171 | 22,171 : | Gross | (Pro | Futu | (3) |
| educe | | | ē. | ducti | re Wi | •• |
| d by 19 | 14,927 | 14,927 | Cost | (Production in Dollars | Future Without Project | (4) |
| acres | •• •• •• •- •- | Z | •• | llars | oject | *** |
| water | 7,244 | 7,244 | Net | | | (5) |
| and 2 | •• •• •• | AND C | •• | •• | 40 | |
| 3 acres woo | 27,480 | ZOMES B AND C (subject to flooding 7,244 : 27,480 : 19,526 | Gross | (Prod | Fut | (6). |
| dland | •• •• • | to fl | •• | uctio | ure W | •• |
| not anti | 19,526 | 19,526 | Cost | (Production in Dollars | Future With Project: | (3) |
| cipated to | 7,954 | . 7,954. | : Net | ars) | ct | : (0) |
| 1/ Total area zones B and C reduced by 19 acres water and 23 acres woodland not anticipated to be cleared. | 710 | 710 | . Net Production | : Difference in | •• | (k) |
| . ' | | -226- | | | | : |

Basin: Project: St. Francis River
Cockle Burr Slough Ditch

Reach: 1
State: A

Arkansas

TABLE IX
SUMMARY OF ANNUAL NET PRODUCTION RETURNS
AND ASSOCIATED COSTS

| | (1) | (2) | ; (3) : Discounted |
|----------------|---|--|--|
| | Item : | Total . | : Amount |
| | 3 3 | Dollars | Dollars |
| 1. 2. 3. | Net return with project Net return without project Gross benefit to project | 7,954 7,244 710 | xx xx 563 <u>1</u> / |
| 4. | Farm drainage cost a. Installation cost b. Maintenance cost c. Total | xx 158 189 347 | xx <u>1</u> / xx xx xx 275 |
| 5. | Group drainage cost a. Installation cost b. Maintenance cost c. Total | ************************************** | xx <u>2</u> / xx xx |
| 6. | Conversion cost a. Installation cost b. Maintenance cost c. Total | ************************************** | xx 2/ xx xx - |

Discounted at 5 percent to account for estimated 10 year lag to full installation, maintenance, and benefit accrual.

^{2/} No group drainage or conversions; no Tables VI and VIII required.

TABLE I PRESENT LAND USE

| Zone :Soil ma | p-: Open :W it:(Acres) :(| ooded Acres) | | Water (Acres) | |
|------------------------------|------------------------------|-----------------|-------|------------------|------------------------|
| Zone A : 3 | : 4,470: : 11,516: | 207 | - | - | : 4,677 : 11,525 |
| : 11 : 12 : 16 | 532: 8,733: 19,222: | 9 9 36 | - | | 541 8,742 19,258 |
| Subtotal - all soil Urban | | 270 | 261 | | : 44,743 : 261 |
| Water Total - Zone A | 44,473 | 270 | 261 | - | 45,004 |
| Zone B : 4 : 12 | : 1,750: : 771: | 7 | : - | - | : 1,757 : 771 |
| Subtotal - all soil Urban | s: 2,521: | 7 | : - : | - | 2,528 - |
| Water Total - Zone B | 2,521: | 7 | : - : | 58 58 | 58 2,586 |
| GRAND TOTAL - Reach 2 | : 46,994: | 277 | : 261 | 58 | : 47 , 590 |

SUMMARY - TABLE II A ZONE FOR DRAINAGE CALCULATIONS ONLY COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1) Soil Unit | (2) Land use and crop distribution | : (3) : 2/ : Acres | : (4) : : Unit : | Production Per Acres | |
|---------------------|---|--|--|--|---|
| All | Open land Crops Cotton Cottonseed Corn Soybeans Oats (Grain) Oats (Sup. Past.) Perm. Pasture Idle Other 1/ Woodland TOTAL | : 34,838 : 31,354 : 11,547 : (11,547) : 2,952 : 10,805 : 3,980 : (228) : 604 : 1,466 : 3,484 : 252 : 35,090 4/ | Lbs.Lint Ton Bu. Bu. Lbs.Beef Lbs.Beef | 3/ 310 •2793 29 18 23 70 | 3,583,345 3,225.01 85,315 194,873 90,205 15,960 108,720 |

1/ Farmsteads, farm roads, waste and non-agricultural

2/ Parenthetical amounts are duplicated acreages
3/ Calculated from Columns 3 and 6; rounded to nea

Calculated from Columns 3 and 6; rounded to nearest unit Total area Zone A reduced by 261 acres urban, and 9,653 acres already drained or not requiring drainage.

SUMMARY - TABLE III A

PRODUCTION COSTS AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE CALCULATIONS ONLY (Based on projected prices)

| - /- | ; | | | | | | | | | | A | | Unit | Soil | (I) |
|------|-----------------|------------|------------------------|----------------------|------------------|-----------------|---------------|----------------|-----------------|-----------|---------------|-------------|------------------|--------------------------|---------|
| | TOTAL | : Other 1/ | : Perm. Pasture : Idle | : Oats (Sup. Past.): | : Oats (Grain) : | : Soybeans : | : Corn : | : Cottonseed : | : Cotton : | : Crops : | : Open land : | •• | : distribution : | : Land use and crop : | : (2) : |
| | 20,222 5/ | 2,022 | 290 591 | (138) | 1,799 | 15465 | 1,648 | (8,421) | 8,421 | 18,200 | 20,222 | | Acres | 2/ | (3) |
| | 2/: | Acres | :Lbs.Beef | :Lbs.Beef | Bu. | : Bu. | : Bu. | : Ton | :Lbs.Lint | •• | •• | •• | : Unit | •• | : (1) |
| | 00, 00,, | •• •• | 235 | : 205 | 25 | : 19 : | : 29 : | | | : w | •• | •• | :Per Acre: | Production | : (5) : |
| | : | | 68,150 | 14,490 | HL 996 | 105,390. | 48,364 | 2,385.45 | 2,650,505 | | | | Total | tion | (6) |
| | •• •• | •• •• | 2005 | 2005 | . 90 | 2.30: | 1.45: | 63.00 | | •• | •• | : Dollars : | Per Unit | : Value of production | : (7) |
| | 1,182,499 | | 13,664 | 2,905 | ٥٠,497 | 242,396 | 70,127 | 150,284 | 662,626 | | | Dollars | Total | Þ | (8) |
| | • | | 33.93 | 9.47: | 16.96 | 25.41: | 26.43: | • | 88-37: | F | | Dollars: | Per Acre: | :Cost of pr | (9) |
| | 967,878:214,623 | • • • | .01866 | 1,307: | 30.508 | 138 514:103.882 | 43.550: 26.57 | | 744,159: 68.751 | • | | Dollars :D | Total :R | :Cost of production: Net | (0T) |
| - | 14,621 | | 3,824 | 1.598 | 9,9896 | 03.882 | 26.577 | | 68.751 | | | :Dollars | Return | Net | E |

Farmsteads, farm roads, waste and non-agricultural
Parenthetical amounts are duplicated acreages

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent

Total area Zone A reduced by 261 acres urban, 252 acres woodland not anticipated to be cleared, and 24,269 acres already drained, not requiring or not anticipated to be drained.

State: Arkansas & Missouri Reach: Project: Cockle Burr Slough Basin: St. Francis River Ditch

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT (Based on projected prices) COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE CALCULATIONS ONLY SUMMARY - TABLE IV A

| -5 74 | All | Soil Unit |
|--|-------------|--|
| Crops Cotton Cottonseed Corn Soybeans Oats (Grain) Oats (Sup. Past.) Perm. Pasture Idle Other 1/ Woodland TOTAL | : Open land | : (2) : Land use and crop : distribution |
| 18,200 8,421 (8,421) 1,648 5,451 1,799 (138) 290 290 290 290 290 20,222 <u>5</u> / | 20,222 | (3) <u>2/</u> |
| Ibs.Lint Ton Bu. Bu. Lbs.Beef Lbs.Beef | •• ``•• | (4) - Unit |
| 395 160 160 17585 | | (5) : Production Per Acces |
| 4,197.67 4,197.67 87,346 139,596 82,348 22,080 114,550 | | (6) |
| 63.00 1.45 2.30 2.30 | Dollars | Value of pr |
| 1,166,019 264,453 126,652 321,071 74,114 4,427 22,967 | Dollars : | preduction : |
| 147.08 30.30 27.63 54.09 | Dollars: I | (9) : Cost of pro |
| 1,238,576:191,896 75,953:50,699% 165,152:155,919% 49,678:24,436 12,281 2,146:2,281 15,683:7,284 15,683:7,284 | Dollars :Do | : (9) : (10) : (11 Cost of production: Net: Per Acre: Total Retu |
| 91,896 50,699% 55,919% 2,281 7,284 | Dollars | (11) Net Return |

Farmsteads, farm roads, waste and non-agricultural

Parenthetical amounts are duplicated acreages

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent

ではまをでて Total area Zone A reduced by 261 acres urban 252 acres woodland not anticipated to be cleared, and 24,269 acres already drained, not requiring or not anticipated to be drained

SUMMARY - TABLE II B ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (l) soil | (2) Land use and crop | (3) | | (5): | (6) |
|----------|---|---|---|--|--|
| Unit | distribution | Acres | : Unit :F | er Acre: | Total |
| All | Open land Crops Cotton Cottonseed Corn Soybeans Oats (Grain) Oats (Sup. Past.) Perm. Pasture Idle Other 1/ Woodland TOTAL | 2,521 2,269 835 (835) 218 712 312 (44) 95 97 252 7 | Lbs.Lint: Ton Bu. Bu. Lbs.Beef: Lbs.Beef: | 3/ 391 3523 35 23 32 70 180 | 326,865 294.17 7,567 16,552 9,879 3,080 17,100 |

Farmsteads, farm roads, waste and non-agricultural
Parenthetical amounts are duplicated acreages
Calculated from Columns 3 and 6; rounded to nearest unit
Total area Zone B reduced by 58 acres water.

Reach: Basin: St. Francis River Project: Cockle Burr Slough Ditch Arkansas & Missouri

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT (Based on projected prices) COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS SUMMARY - TABLE III B

| | | All | (1) Soil Unit |
|-------------------------|--|-------------------------|------------------------------------|
| Other 1/ Woodland TOTAL | Corn Soybeans Oats (Grain) Oats (Sup. Past.) Perm. Pasture | Cotton | (2) Land use and crop distribution |
| 252 5/ | 38 <u>(</u> 27758) | 2,521 2,269 2,269 | (3) <u>2/</u> Acres |
| Acres | Bu. Bu. Bu. Lbs.Beef Lbs.Beef | : : :Lbs.Lint | (4) |
| | 41 27 37 120 265 | 452 | Production: Per Acre: |
| | 7,511 19,183 10,387 5,280 25,175 | 413,050 | (6) Total: |
| | 2005 | | 4 4 |
| 197,1148 | 10,891 14,121 9,348 1,059 5,048 | 103,262 23,119 | |
| 00 00 20 00 00 | 34.54 31.27 22.79 11.12 37.70 | 119.08 | e g |
| 148,027 : 49,121 | 6,320 22,486 6,314 489 3,581 | 108,837 :17,844 | (10) roduction Total |
| 121,64 | 4,571 3 21,635 2 3,034 - 1,467 | 17,844 | (11) Net Return |

ら内をるて Farmsteads, farm roads, waste and non-agricultural Parenthetical amounts are duplicated acreages

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent

Total area Zone B reduced by 58 acres watered and 7 acres woodland not anticipated

to be cleared.

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS (Based on projected prices) SUMMARY - TABLE IV B

| TOTAL | Other 1/ | Perm. Pasture | : Soybeans : Oats (Grain) : | : Cottonseed : | : Crops | All : Open land | Unit: distribution : | (1): (2) Soil: Land use and crop |
|-----------------|-------------------|------------------------------|-------------------------------------|--------------------------------|-----------------|-------------------|----------------------|---|
| 2,521 <u>5/</u> | 252 | | 719 | 183 | 2,269 | 2,521 | Acres | (3) 2/ |
| • | Acres | Lbs.Beef Lbs.Beef | Bu. | Bu. | Lbs Lint | | Unit Per | (4) : (|
| | • • • | 360 : 34, | •• •• | * *** **** *** | 525 : 479,650 | •••• | Per Acre: Total | : (5) : (6) Production |
| •• | - 00 00 (| 34,200 : .2005 | 19,183 : 2,30 | 431.68 : 63.00 8,380 : 1.45 | 650 :25 | Dollars | | : (7) :Value of |
| 222,153 | | 1,323 | 10,594 | 27,195 | : 119,912 | Dollars | : Total | Value of production : (9) : (10) : Value of production: |
| • | | 69.64 | •• •• | 38.66 | 139.76 | :Dollars :Do | :Per Acre: Total | (9) : |
| 169,796 :52,357 | 4 | 636 : 687 1 4,721 : 2,136 | 22,486 :21,635 % 7,141 : 3,453 % | • | 127,737 :19,370 | :Dollars :Dollars | otal :Return | (10) : (11) duction: Net |

Total area Zone B reduced by 58 acres watered and 7 acres woodland not Calculated from Columns 3 and 6; rounded to nearest unit Parenthetical amounts are duplicated acreages Farmsteads, farm roads, waste and non-agricultural Calculated from Columns 3 and 10; rounded to nearest cent anticipated to be cleared.

TABLE V REACH SUMMARY BY SOIL MAPPING UNITS

| TOTAL | Subtotal | ᅜᅮ | | Subtotal | 76+0 | | Unit | Soil | (1) |
|-------------|----------|-------------------|--------------------------------|---------------------|-------------------------------|------------------------------------|-------------|-------------------------|-------|
| : 22,743 | 2,521 2/ | 1,750 | • | : 20,222 <u>1</u> / | 2,562 5,370 12,290 | | : Acres | •• •• | : (2) |
| : 1,379,647 | 197,148 | 153,877 43,271 | • | 1,182,499 | 188,693 146,794 547,012 | : | : Gross | : (Produc | : (3) |
| 1,115,905 | 148,027 | 117,500 | | 967,878 | 145,602 338,357 483,919 | | Cost | (Production in Dollars) | (1) |
| 263,742 | 49,121 | 36,377 12,744 | ZONE B - (su | 214,621 | 108,437 108,437 63,093 | ZONE A - (no | . Net : | ars) : | (5) |
| :2,201,856 | 222,153 | 178,882 43,271 | ZONE B - (subject to flooding) | 1,979,703 | 233,359 | ZONE A - (not subject to flooding) | Gross | Produ | (6) |
| 1,716,984 | 169,796 | 139,269 | ding) | 1,547,188 | 177,393 141,647 928,148 | flooding) | Cost | (Production in Dollars) | (7) |
| : 484,872 : | 52,357 | 39,613 | | 4,32,515 | 55,966 133,164 243,385 | • | : Net : | | (8) |
| 221,130 | 3,236 | 3,236 | | 217,894 2 | 12,875 24,727 180,292 | | :Production | in Net | (9) |

1/ Total area Zone A reduced by 261 acres urban, 252 acres woodland not anticipated to be cleared, and 24,269 acres already drained, not requiring or not anticipated to be drained.
2/ Total area Zone B reduced by 58 acres water and 7 acres woodland not anticipated to be cleared.

State: Arkansas & Missouri Basin: St. Francis River Project: Cockle Burr Slough Ditch Reach:

> ANALYSIS OF FARM DRAINAGE SYSTEM COSTS TABLE VII

| | | ₩. | | | | A | | Zone |
|-------------|------------|--------------------------------------|----------|---------------------|--------------------------------------|---------------------|---------|------------------------------------|
| TOTAL | : Subtotal | : 4 - General crops : 4 - Pasture | Subtotal | :16 - General crops | : 4 - General crops : 4 - Pasture | : 3 - General crops | | : Soil mapping unit : and land use |
| : A 5111°61 | T 5116 | 888 57 | 18,200 1 | 11,061 | 1,543 | 2,306 | Acres | Area |
| 262,050 | 12,273 | 1194 508 | 249,777 | 147,100 | 60,417 | 39,901 | Dollars | Total Cost 2/ |
| 25,247 | 1,183 | 1,138 1,5 | 24,064 | 14,172 | 5,821 227 | 3,814 | Dollars | Annual Equivalent Instl. Cost 2 |
| : 31,511 | 1,374 | 1,363 | 30,137 | 16,973 | 6,971 | 6,139 | Dollars | Annual Maintenance Cost |
| : 56,758 | 2,557 | 2,501 56 | : 54,201 | 23 ST TE 23 | 12,792 | 9,983 | Dollars | * Total : Annual : Cost |

Does not include 10 percent "other" land

Amortized at 5 percent over 15 years.

Basin: St. Francis River Project: Cockle Burr Slough Ditch

Reach: 2

State: Arkansas & Missouri

TABLE VIII ANALYSIS OF GROUP DRAINAGE NEEDS AND COSTS

| Item | : Unit | : Amount : | Unit : Cost : Dollars : | Total Cost Dollars |
|---|------------------|------------|-------------------------|--------------------------|
| Excavation 1/ Spreading spoil 1/ Clearing right-of-way 1/ | : :Cubic Yard | :110,000 | 0,20: | 22,000 |
| Right-of-way easements | : Acres | 43 | 30.00: | 1,290 |
| Crossings . | Each | 10 | 400.00 | 4,000 |
| Swinging water gaps | Each | . 5 | 50.00 | 250 |
| Pipe drop structures | : Each | 10 | 200,00: | 2,000 |
| Flap gates | Each | 5 | 100.00: | 500 |
| Vegetative plantings | : Acres | 88 | 8.00 | 704 |
| Total construction cost | : xx | xx | xx | 414 و30 |
| Engineering cost | : xx | : xx | xx : | 3,074 |
| Contingencies and legal | xx | XX | xx : | 3,074 |
| Total installation cost | | | | 36,892 |
| Annual equivalent - instal (amortized for 30 years a | | | : | 2,006 |
| Annual maintenance cost | | | , | 1,537 |
| Annual loss of production | - right-of- | way 2/ | | iolı |
| Total annual cost of requi | red group f | acilities | | 3,647 |

^{1/} These items included in excavation costs under normal contract procedures.

^{2/} Annual loss of production - right-of-way. 9 acres @ \$11.60 per acre.

Basin: St. Francis River

Project: Cockle Burr Slough Ditch

Reach: 2

State: Arkansas & Missouri

TABLE IX SUMMARY OF ANNUAL NET PRODUCTION RETURNS AND ASSOCIATED COSTS

| Item 1. Net return with project | Total Dollars 484,872 | Discounted Amount Dollars |
|---|----------------------------|-----------------------------|
| 2. Net return without project 3. Gross benefit to project | 263,742 221,130 | 137,370 2/ |
| 4. Farm drainage cost a. Installation cost b. Maintenance cost c. Total | 25,247 31,511 56,758 | xx 2/ xx xx 35,259 |
| 5. Group drainage cost a. Installation cost b. Maintenance cost 1/ c. Total | 2,006 1,641 3,647 | xx 3/ xx xx 3,028 |
| 6. Conversion cost a. Installation cost b. Maintenance cost c. Total | xx | хх хх хх л/ |

^{1/} Includes loss of production, right-of-way

^{2/} Discounted at 5 percent to account for estimated 20 year lag to full installation, maintenance, and benefit accrual.

^{3/} Discounted at 3½ percent to account for estimated 10 year lag to full installation, maintenance, and benefit accrual.

1/ No conversions; no table VI required.

Basin: Project: St. Francis River
Tributaries of
Cockle Burr Inlet
Arkansas-Missouri

State:

TABLE I PRESENT LAND USE

| | * 0 | | | | | |
|---------------------------------------|----------|---------|------------|----------------|---|-----------|
| | oil map- | | | :Watered: | | |
| Zone spi | ing unit | (Acres) | (Acres) | (Acres): | (Acres) | (Acres) |
| . : | 2011 | | | : | | : |
| Zone A : | 3 | 2,037 | 180 | - 1 | · · · | : 2,217 |
| | 4 | 5,432 | | - : | ş:: 🕳 | : 5,802 |
| | - 6 | 739 | | : - : | - | : 902 |
| | 11 | 387 | : | \$ | - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 | : 387 |
| | 12 | 9,584 | 34 | - 1 : | : | : 9,618 |
| | 16 | 980. | | 0 - 1 | a 4 | : 1,023 |
| Subtotal - all | | 19,159 | 790 | | ap ² | :19,949 |
| Urban | _ #., | | - | 249 8 | | : 249 |
| Water | | | | 1 - 1 | | 1 - |
| Total - Zone A | 1, 1, 2 | 19,159 | 790 | 249 : | | :20,198 |
| | | | 200 20 100 | | | |
| Zone B | 1 | 101 | 7 | | _ | : 108 |
| e | 4 | 1,721 | 178 | | | : 1,899 |
| • | 6 | 25 | Ł | | | : 25 |
| | | 1,257 | . 135 | _ | _ : | : 1,392 |
| Subtotal - all s | | 3,104 | 7.00 | - | | : 3,424 |
| Urban | (3) | | . 020 | | | • 09±2± |
| Water | | | | | 58 | : 58 |
| Total - Zone B | : | 3,104 | 320 | | 58 | \$ 3,482. |
| 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | : | 0,104 | . 020 | | | · Ug TUE |
| GRAND TOTAL Project | et s | 22,263 | 1 110 | 2/10 | 58 | 107 680 |
| | | 22,200. | 110 | :243 8 | 90 | 23,680 |
| | | | | | | 1 |
| | | | | | | |

Project:

St. Francis River Tributaries of Cockle Burr Inlet

State:

Arkansas-Missouri

SUMMARY - TABLE II A ZONE FOR DRAINAGE CALCULATIONS ONLY COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1): (2) Soil: Land use and crop | : (3) | : (4) | f (5) | (6) |
|--|---|---|--------------------------------|---|
| Unit: distribution | : Acres | : Unit | :Per Acre | Total |
| All: Open land : Crops : Cotton : Cottonseed : Corn : Soybeans : Oats (Grain) : Perm. Pasture : Idle : Other 1/ :Woodland : TOTAL | 9,038 8,134 3,251 (3,251) 303 2,567 955 316 742 904 756 | Lbs.Lint Ton Bu. Bu. Bu. Lbs.Beef Acres | :.3305 : 39 : 21 : 28 | 1,193,765 1,074.39 11,687 54,475 26,710 |

Farmsteads, farm roads, waste and non-agricultural Parenthetical amounts are duplicated acreages. Calculated from Columns 3 and 6; rounded to nearest unit Total area zone A reduced by 249 acres urban, and 10,155 acres already drained, not requiring drainage or not anticipated to be drained.

Basin: St. Francis River
Project: Tributaries of
Cockle Burr Inlet
Arkansas - Missouri

SUMMARY - TABLE III A

ZONE FOR DRAINAGE CALCULATIONS ONLY

COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION, PRODUCTION COSTS AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT

(Based on projected prices)

| 7 | | | | _ | | 44 | | | | _ | | | | All : | | Unit: | Soil : | (1) | |
|---------------------------------|-----------|----------------|----------|---------|------|---------------|---------------|--------------|------------|-----------|------------|------------|-----------|-----------|-----------------------|--------------|---|-------|---|
| 1 | | TOTAL. | Woodland | Other 1 | Idle | Perm. Pasture | Grain Sorghum | Oats (Grain) | Soybeans | Corn | Cottonseed | Cotton | Crops | Open land | | distribution | Land use and crop | (2) | |
| | 00 0 | • | •• | •• | ** | 90 | •• | 40 | ** | •• | •• | 44 | •• | •• | •• | •• | ** | •• | |
| | 7 27.62 | 5 410 - | 1 | 540 | 213 | 193 | 230 | 559 | 1,292 | 224 | (2,159) | 2,159 | 4,870 | 5,410 | | Acres | 2/ | (3) | |
| | •• • | 2 | ** | •• | 04 | 4Tp | •• | ** | .00 | ** | •• | 4TP | •• | 66 | ** | | ** | 84 | |
| | | | Acres | | | Lbs.Beef | Bu. | Bu. | Bu. | Bu. | Ton · | Lbs.Lint | `. | | | Unit | | (4) | |
| | •• | • | •• | | •• | •• | *** | •• | •• | •• | ** *** | •• , | 98 | •• | •• | . Pe | Pro | : (5) | |
| - | | | | | | 230 | 24 | 30 | 24 | 40 | .3550 | 394 | 13 | : | ٠. | :Per Acre: | Production | (5) | |
| | 99 ' | • | ••• | •ė | ** | | | •• | • | Le fun | ** | • | •• | | •• | re | i on | •• | |
| | ÷ | | | | | 44,475 | 5,547 | 16,755 | 31,623 | 9,008 | 766.45 | . 851, 605 | | | | Total | | (6) | |
| | •• • | • | •• | ** | •• | •• | •• | •• | ** | ** | •• | •• | •• | •• | | a P | V. | •• | |
| | : | | | * | | 2005 | 1.53 | .90 | 2.30 | 1.45 | 63,00 | 25 | | | Dollars | Per Unit | Value of production : Cost of production: Net | (7) | |
| | •• • : | • | •• | ••, | •• | ** | | •• | •• | •• | 00 | •• | •• | •• | •• | •• | o ra | •• | ı |
| | : 0 | 379 463 | | | | 8,917 | 8,487 | 15,079 | 72,732 | 13,061 | 48,286 | 212,901 | | *** | Dollars | Total | duction | (8) | |
| | ** * | | ** | •• | ** | •• | ** | ** | •• | •• | •• | 99 | •• | •• | : Do | . Pe | 3 C C | •• | |
| The second second second second | | | •• | •• | | 32,56: | 21.58 | 19.33: | 29,48 | 34 0 35 | •• | 104.45 | 4/ | | : Dollars : Dollars : | :Per Acre: | st of p | (9) | |
| | 1 | 29 | | | | | | | | | | | | | Do | | rodu | (10) | |
| 1 | 2 | 293 329 86 134 | | | | 5,284 | 4,964 | 10,803 | 38,083 | 7,694 | | 225,501 | | | llars | Total | action | (0) | |
| | | 86 | | ** | ** | × N | •• ن | * 4 | 3 4 | ජා | •• | * 35 | 94 | •• | | Re | * Ne | | |
| 1 | | 134 | | | | 2,633 | 3,523 | 276 | 34,649 | 5,367 | | 35,686 | | | Dollars | Return | čt | 11) | |
| | | | | | | | - 2 | 42 | ., | ÷ . | | | | | | | | | |

Farmsteads, farm roads, waste and non-agricultural

Parenthetical amounts are duplicated acreages.

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent

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Total area zone A reduced by 249 acres urban, 756 acres woodland not anticipated to be cleared, and 13,783 acres already drained, not requiring drainage or not anticipated to be drained,

State: Project: Basin: St. Francis River Tributaries of Arkansas Missouri Cockle Burr Inlet

ZONE FOR DRAINAGE CALCULATIONS SUMMARY - TABLE IV A ONLY

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT (Based on projected prices) COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION

| | | | | | | icultural | and non-agr | ids, waste | 2/ Farmsteads, farm roads, waste and non-agricultural |
|----------|-----------------------|------------|---|-------------|-----------|--|-------------|---------------|---|
| | •• | • | ** | •• | | 3° 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 | | 10 | 0.0 |
| 129 | 433,728 :129,302 | •• | 563,030 | | | * | - | : 5,410 | * TOTAL |
| | •• | •• | | •• | | ti a | & Acres | 1 | *Woodland |
| | •• | •• | •• | •• | | •• | •• | \$ 540 | : Other 1/ |
| e 11 | •• | •• | 40 | 116 | | | •• | : 156 | • Idle |
| | 10,186 : | 52,78: | 15,285 : | 2005 | 76,235 | : 395 | *Lbs Beef | 193 | Permo Pasture |
| 3,628 | 5,035 : | 21.89 : | 8,663 | 1.53 | 5,662 | . 25 | : Bu. | \$ 230 | : Grain Sorghum |
| 6,777 | 14,176: | 28.24 : | 20,953 | 90 : | 23,282 | . \$46 | s. Bu. | \$ 502 | : Oats (Grain) |
| 40 | 41,043 : | 31.77 : | : 81,748 : | 2.30 | 35,543 | 28 | . Bu. | 1,292 | : Soybeans |
| တ | 10,055 : | 55.55 * | : 16,473 : | 1,45 | H 361 | *** ** 63** 9 | . Bu. | 181 | : Corn |
| | ** | •• | 1 77,630 s | 8 63.00 : | 1,232.21 | : .5320 | * Ton | : (2,316) | * Cottonseed |
| : 66,675 | 353,233 : | 152,52 | 342,278 | .25 | 1,369,110 | : 591 | &Lbs.Lint | : 2,316 | * Cotton |
| | ** | 4/ * | 10 | | | : 3/ | *//* | : 4,870 | : Crops |
| | •• | •• | 20 | • | ī | •• | ** | : 5,410 | All: Open land |
| Dollars | : Dollars : Dollars : | Dollars : | Dollars : | :Dollars | | •• | •• | •• | •• |
| Re | Total : Return | sFer Acres | Total : | Per Unit : | Total | Per Acre | * Unit | * Acres | Unit: distribution |
| Ne. | roduction: | Cost of pi | Value of production a Cost of production: Net | *Value of p | a a | Production | •• | 2 | Soil : Land use and crop |
| 1 | (10) : (11 | (9) | : (8) : | : (7) | (6) | : (5) : | : (4) | : (3) | (1) : (2) |
| | | | | | | | | | |

Parenthetical amounts are duplicated acreages.

Calculated from Columns 3 and 10; rounded to nearest cent Calculated from Columns 3 and 6; rounded to nearest unit

Total area zone A reduced by 249 acres urban, 756 acres woodland not anticipated to be cleared, and 13,783 acres already drained, not requiring drainage or not anticipated to be drained.

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St. Francis River Tributaries of Cockle Burr Inlet Arkansas-Missouri

State:

SUMWARY - TABLE II B

ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS

COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1) s | (2) : Land use and crop: | (3) | : (4) : : F | (5) : Production | (6) |
|--------|---|---|-------------------------------------|--|---|
| Unit : | distribution : | Acres | : Unit : | Per Acre: | Total |
| A11 | Open land Crops Cotton Cottonseed Corn Soybeans Oats (Grain) Perm. Pasture Idle Other | 3,104 2,793 1,116 (1,116) 157 1,022 252 | Lbs.Lint: Ton Bu. Bu. Bu. Lbs.Beef: | 3/ s 384 s •3454 s 33 s 23 s 32 s | 428,300 385,47 5,172 23,510 8,024 18,515 |
| | TOTAL | 3,424 | 7 | 1 | |

1/ Farmsteads, farm roads, waste and non-agricultural 2/ Parenthetical amounts are duplicated acreages

Calculated from Columns 3 and 6; rounded to nearest unit
Total area zone B reduced by 58 acres water.

| (Based on projected prices) | į | |
|--|-------------------------|----------|
| PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT | Arkansas - Missouri | State: |
| COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION | Cockle Burr Inlet | |
| ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS | Project: Tributaries of | Project: |
| SUMMARY - TABLE III B | St. Francis River | Basin: |
| | | |

| 1 | | | | | | | ricultural | and non-agi | ds, waste a | 1/ Farmsteads, farm roads, waste and non-agricultural | م[ب |
|----|-----------|-----------------|------------------------|---|------------|---------|----------------------|-------------|-------------|---|------|
| | • | | | | •• | | 2. | | Lo | | |
| | 62,494 | 190,796: 62,494 | *1 | 253,290 | | | •• | % | 3,327, | * TOTAL | |
| | P 9 | •• | •• | • | •• | | •• | a Acres | 1: | *Woodland | |
| | | •• | 24 | •• | ** | | •• | •• | .333 | * Other 1/ | |
| | 0 | •• | • | •• | •• | t. | •• | •• | 1 56 | * Idle | , |
| | 923 | 2,052 | : . 38.71: | 2,975: | 2005 | 14,840 | 280 * | :Lbs.Beef | 53 | Perm. Pasture | |
| -2 | 2,622 | 4,142: | 19,63: | : 6,764; | 1 1.53 | 4,421 | 21 * | * Bu. | 211 | : Grain Sorghum | |
| 45 | 2,838 | : 6,099; | 22.51: | : 756 8 | . 05 W | 9,930 | 8 37 8 | * Bu. | 271 | * Oats (Grain) | |
| - | 28,736 | 29,725; | 31.22: | : 58,461 : | 2,30 | 25,418 | 27 : 27 | * Bu. | 952 | * Soybeans | |
| | 4,020 | 5,787; | 38 ,58 : | : 9,807: | 1.45 | 6,763 | . 45 | . Bu. | 150 | ** Corn | |
| | - | 2 | | : 30,752: | : 63,00 | 488.14 | : 4064 : | * Ton | : (1,201) | * Cottonseed | |
| | 23,355 | 142,991: | : 119.06: | : 135,594: | . 25 | 542,375 | 452 | *Lbs .Lint | 1,201 | * Cotton | |
| 3 | | •• | 4/ | ** | •• | | 3/ : | •• | 2,994 | & Crops | |
| | | | | N A more | •• | 11 | •• | ** | 3,327 | ll :: Open land | All |
| | : Dollars | | :Dollars :Dollars | : Dollars : | :Dollars | | •• | | , ; , | •• | |
| | Return | | Per Acre: | : Total : | Per Unit : | Total | :Per Acre: | : Unit | Acres | it : distribution | Unit |
| | Net | oduction: | Cost of pr | : Value of production : Cost of production: | *Value of | | Production | •• | 2/ | Land use | Soil |
| | (11) | (10): | : (9) : | : (8) : | : (7) | (6) | : (5): | : (4) | : (3) |): (2) | (1) |
| | | | | | | | | | | | |

Parenthetical amounts are duplicated acreages.

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent

Total area zone B reduced by 58 acres water and 97 acres woodland not anticipated to be cleared.

Basin:
Project:
Tributaries of
Cockle Burr Inlet
State:
Arkansas

19 5

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS (Based on projected prices) SUMMARY - TABLE IV B

| | | A11 | Soil Unit |
|------------------------------------|--|-------------------|--|
| other 1/ Woodland Total | cottonseed Corn Soybeans Oats (Grain) Grain Sorghum | Open land | : (2) : Land use and crop : distribution |
| 138 333 3,327 ₅ / | 1,201 1,201 150 899 413 | 3,327 | (3) Acres |
| Aores | Lbs.Lint Ton Bu Bu Bu | 49 | * (4) ; |
| | 525 525 527 527 27 27 | | : (5) : Production :Per Acre: |
| | 630,375 567,34 7,831 23,881 17,227 | | (6) 1 |
| | 63,00 1,45 2,30 | Dollars | (7) : Value of p |
| 281,197 | 157,594 35,742 11,355 54,926 15,504 6,076 | Dollars | (8) roduction Total |
| | 137.23 45.52 31.12 19.39 | Dollars | : (9) : :Cost of pr |
| 213,906 : 67,291 | 164,815; 28,521 6,828; 4,527 27,973; 26,953 10,547; 4,957 3,743; 2,333 | Dollars : Dollars | (10) : roduction: Total : |
| 67,291 | 26 953 2 4 957 2 333 -246 | Dollars | (11) Net Return |

Farmsteads, farm roads, waste and non-agricultural Parenthetical amounts are duplicated acreages.

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent

Total area zone B reduced by 58 acres water and 97 acres woodland not anticipated to be cleared.

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Basin: St. Francis River
Project: Tributaries of
Cockle Burr Inlet
State: Arkansas-Missouri

TABLE V PROJECT AREA SUMMARY BY SOIL MAPPING UNITS

| | | | | | | | | | - |
|-------------------------|----------------------|------------------|-------------------------|--|------------------|------------------------|-----------------------|--------------------|-----------|
| | · 47,965 | 196,593 | 647,634 | 844,227 | 148,628 | 484,125 | 632,753 | 8,737 | TOTAL: |
| | . 4 ₉ 797 | 67,291 | 213,906 | 281,197 | 62,494 | 190,796 | 253, 290 | 3,327 2/: | Subtotal: |
| -24 | 4,797 | 47,670 19,621 | 155,910 57,996 | 203,580 : 155,910 : 77,617 : 57,996 | 42,873 19,621 | 132,800 | 175,673 : 77,617 : | 1,976 : 1,351 : | 12 4 |
| 1 7 - | 3 43,168 | : 129,302 | 433,728 | 563,030 | 86,134 | 293,329 | 379,463 | 5,410 1/: | Subtotal: |
| | 1 9,502 | 12,517 | 48,738 | 61,255 | 3,015 | 24,714 | 27,729 : | 621 | 16 |
| | 22,781 5,735 | 85,264 7,911 | 281,075 | 35,857 | 62,483 2,176 | 15,048 | 255,525 : 17,224 : | 3, 163 | 4 O |
| | : 5,150 | _ | 99,579 : 75,969 : | 1 (not subject 99,579 : | 18,460 | 60,525 | 78,985 | 1,202 | 50 Cd |
| ction | :Net Production | . Net | Cost | s Gross : | Net: | Cost | fross : | Acres : | Unit : |
| e in | Difference in | ars) | (Production in Dollars) | | llers) | (Production in Dollars | (Produ | •• • | Soil : |
| | : (9) | (8) | Future With Project | (6) : | : (5) | * (4) : | (3) : | (2) | (I) |
| | | | | | | | | | |

T Total area zone A reduced by 249 acres urban, 756 acres woodland not anticipated to be cleared, and 13,783 acres already drained, not requiring or not anticipated to be drained.

¹² Total area zone B reduced by 58 acres water and 97 acres woodland not anticipated to be cleared.

St. Francis River Tributaries of

Cockle Burr Inlet Arkansas-Missouri

State:

LAND CONVERSIONS WITH PROJECT

| (1) | (2) | (3) | : (4) | : (5) |
|---------------------------|----------|----------------------------|-----------------|----------|
| | • | Cost | : Cost | : |
| Type of | Total : | of | : of | : Total |
| Conversion 1/ : | Amount : | Clearing | :Smoothing | : Cost |
| | Acres : | Dollars | : Dollars | :Dollars |
| • | | | : | ; |
| Per Acre | : | • | • | : |
| W to GC | xx : | → ') | \$ ' · | s xx |
| W to IC | XX : | • | \$: → ` | : XX |
| W to P | " XX : | r en e | # | \$ XX |
| P to GC | XX \$ | xx | : 15.00 | \$ XX |
| P to IC | xx s | xx xx | \$ - 3 - 2 m | 2 XX |
| GC to IC | . , xx : | xx | \$ XX | \$ XX |
| GC to P | xx : | xx | \$. XX | \$ XX |
| | : | • • | : | : |
| | : | | 1 | : |
| Project | : | the transfer of the second | * | : |
| W to GC | - : | - | \$ | : |
| W to IC | - : | · •• | - | : ~ |
| W to P | - : | - | * xx | : - |
| P to GC | 53 : | XX - | 1. 795 | : 795 |
| P to IC | - : | xx · | : - | : - |
| GC to IC | - : | xx | * XX | - |
| GC to P | - : | · XX ··· | : XX | : - |
| . 3 | .1 | | : | : |
| | : | | 1. | : |
| Total project : | XX : | - | * 795 | : 795 |
| Amman 3 | : | | 1 | : |
| Annual amortized value 2/ | XX \$ | XX | : xx | : 44 |
| | | | * | • |
| Total annual cost of : | * | | : | : |
| conversions : | XX : | XX | \$ XX | : 44 |
| \$ | : | | 1 | : |

W- woodland; GC- general dry-farmed crops; IC- irrigated crops; (rice); P- pasture
Amortized over 50 years at 5 percent

| | | | | "other" land ntingency 5 percent | Does not include 10 percent "other" land Includes engineering and contingency Amortized over 15 years at 5 percent | [3]211 |
|--------------------|-------------------------|--------------------------------|---|--|--|------------------------------|
| 17,968 | 10,148 | 7,820 | 81,182 | 5,832 1/ | TOTAL | |
| 2,708 | 1,476 | 1,232 | 12,793 | 962 1 | :Subtotal | |
| 2,708 | 1,476 | 1,232 | 12,793 | 962 | 4 - General crops | , t |
| · 15,260 | 8,672 | 6,588 | . 68,389 | 4,870 1 | ;Subtotal | |
| 1,512 | 824 | 688 | 7,142 180 · | 537 | :16 - General crops :16 - Pasture | |
| 1,343 | 826 | \$ 517 | 5,368 | 382 | * 6 - General crops | |
| 7,534 166 | 4,106 32 | 3,428 | 35,587 1,391 | 2,676 | • 4 • General crops • 4 • Pasture | |
| Dollars 4,684 | 2,880 | Dollars 1,804 | Dollars 18,721 | Acres 1,082 | : 3 - General crops | A |
| : Annual : Cost | : Maintenance : Cost | *Equivalent *Instl. Cost 2/ | Cost Installation 1/ | Area | :Soil mapping unit and land use | Zone |
| (7) | ; (6) | : (5) | : (4) | (3) | : (2) | (I) |
| | COSTS | CE VII DRAINAGE SYSTEM (| TABLE VII ANALYSIS OF FARM DRAINAGE SYSTEM COSTS | · F | St. Francis River Tributaries of Cockle Burr Inlet Arkansas. Missouri | Basin: Project: State: |

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St. Francis River

Tributaries of

Cockle Burr Inlet Arkansas-Missouri

State:

TABLE VIII ANALYSIS OF GROUP DRAINAGE NEEDS AND COSTS

| | | | | 4 ** |
|--|---------------|-------------|----------|------------|
| Item | : : : : | Amount | Unit : | Total Cost |
| Excavation 1/ | : : | - | Dollars | Dollars |
| Spreading spoil 1/ Clearing right-of-way 1/ | : CubicYard: | 54,200 | 0.20 | 10,840 |
| Right-of-way easements | Acres | 38 | 30,00 | 1,140 |
| Crossings | Each | , 5 | 300,00 | 1,500 |
| Swinging water gaps | Each : | 4 | 40.00 | 160 |
| Pipe drop structures | Each | 5 | 200.00 | 1,000 |
| Flap gates | Each | 4 | : 100.00 | 400 |
| Vegetative plantings | Acres | 86 | 8.00 | 688 |
| Total construction cost | : xx : | xx | ; xx | 15,728 |
| Engineering cost | ; XX ; | , xx | : xx | 1,573 |
| Contingencies and legal | : xx : | жx | * xx : | 1,573 |
| Total installation cost | | \$ | | 18,874 |
| Annual equivlaent - installat (amortized for 30 years at | | | | 1,026 |
| Annual maintenance cost | F Va | ; | | 786 |
| Annual loss of production - r | ight-of-way | 2/ | ** 5 | 136 |
| Total annual cost of required | group facilit | cies | - | 1,948 |
| | | | | |

These items included in excavation costs under normal contract procedures.

Annual loss of production - right-of-way. 8 acres @ \$17.01 per acre.

St. Francis River Tributaries of

State: Ar

Cockle Burr Inlet Arkansas-Missouri

TABLE IX

SUMMARY OF ANNUAL NET PRODUCTION: RETURNS AND ASSOCIATED COSTS

| | (1) | : (2) | : (3) |
|----|----------------------------|-----------|-------------|
| | • | : | :Discounted |
| | Item | : Total | * Amount |
| - | | : Dollars | : Dollars |
| | | 1. | 1 |
| 1. | Net return with project | 196,593 | * * xx |
| 2. | Net return without project | 148,628 | t xx |
| 3. | Gross benefit to project | 47,965 | 38,022 2/ |
| | | 11,000 | : |
| 4. | Farm drainage cost | 1 1 XX | : xx 2/ |
| • | a. Installation cost | | |
| | | 7,820 | \$: XX |
| | | : 10,148 | t : XX |
| | c. Total | 17,968 | 14,243 |
| 5. | Group drainage cost | 1 200 | xx 3/ |
| | a. Installation cost | : 1.026 | 1 XX |
| | b. Maintenance cost 1/ | 922 | 1 XX |
| | c. Total | 1,948 | 1,618 |
| | : : | 1 | 1,010 |
| 6. | Conversion cost | z xx | 1 xx 2/ |
| | a. Installation cost | * 44 | i xx |
| | b. Maintenance cost | 1 - | t xx |
| | c. Total | 1 44 | 3 35 |
| | | • | . 30 |
| - | | • | 3 |

1/ Includes loss of production, right-of-way

2/ Discounted at 5 percent to account for estimated 10 year lag to full installation, maintenance, and benefit accrual.

3/ Discounted at 3½ percent to account for estimated 10 year lag to full installation, maintenance, and benefit accrual.

Basin: St. Francis River Project: Ditch # 10

State: Arkansas

TABLE I PRESENT LAND USE

| Zone | :Soil map- | | Wooded : (Acres): | | | : Total):(Acres) |
|------------------|------------|---|-------------------|---------------------------------------|-------------|----------------------|
| Zone A | : 1 | 2,912 | 219: | • | : - | : 3:131 |
| | 4 | 53,498 | 4,741: | er de la regione de la composition de | • | : 58,239 |
| | : 7 | 378: 1,481: | | 940 | : - | : 388 : 1,700 |
| | 10 | 22,147 | | Profesional de Light des | | : 27,037 |
| | : 11 | 2,107: | | - | : | : 2,107 |
| | : 12 | 537 | | gg 🖦 1 | | : 547 |
| | : 15S | 10,945 | |) ** : | • ; | : 14,076 |
| Subtotal - a | ll soils | 94,005 | 13,220: | | : - | :107,225 |
| Urban Water | | - e to co - to - to - to - to - to - to - t | | 1,043 | | : 1,043 |
| Total - Zone | A | 94,005 | 13,220: | 1,043 | | :108,268 |
| Zone B | 1 | 5,799 | | - | : · · · · · | : 6,151 |
| | 4 4 | 31,240: | | - . | : - | : 32,735 |
| | 10 | 40: 982: | | | - | : 76 |
| Subtotal - a | ll soils | 38,061 | 1,895: | 11111 | | : 39,956 |
| Water | 7 | - 1 | | - | 256 | 256 |
| Total - Zone | В | 38,061 | 1,895: | - | 256 | : 40,212. |
| GRAND TOTAL - Pr | oject | 132,066 | 15,115 | 1,043 | 256 | 148,480 |
| | | | | | : | • |

Basin: St. Francis River
Project: Ditch # 10
State: Arkansas

ZONE FOR DRAINAGE CALCULATIONS ONLY COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| | 1 - 1 (6) - 1 |
|--|--|
| (1): (2): (3): (4): (5) Soil: Land use and crop: 2/: Producti | on (6) |
| Unit : distribution : Acres : Unit : Per A | The state of the last of the state of the st |
| All : Open land : 71,852 : 64,667 : Cotton : 27,859 : Lbs.Lint : 36 : Cottonseed : (27,859) : Ton : 329 : Soybeans : 14,308 : Bu : 22 : Cats (Grain) : 5,888 : Bu : 22 | 3/: 6 :10,202,040 6 : 9,181.83 2 : 313,617 9 : 168,456 6 : 184,970 9 : 30,800 |

^{1/} Farmsteads, farm roads, waste and non-agricultural
2/ Parenthetical amounts are duplicated acreages
3/ Calculated from Columns 3 and 6; rounded to nearest unit
1/ Total area Zone A reduced by 1,043 acres urban and 25,294
acres already drained or not requiring drainage.

Basin: Sto Francis River
Project: Ditch # 10
State: Arkansas

PRODUCTION COSTS AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT (Based on projected prices) COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE CALCULATIONS ONLY SUMMARY - TABLE III A

| | LLA | (1) Soil Unit |
|---|---------------------------|---|
| Cottonseed Corn Rice Soybeans Oats (Grain) Oats (Sup. Past.) Grain Sorghum Perm. Pasture Idle Other 1/ Woodland TOTAL | Open land Crops | : (2) : Land use and crop : distribution |
| (19,505) (19,505) (1,564) (1,564) (1,564) (1,564) (1,564) (1,564) (1,564) (1,564) | 15,642 | (3) 2/ |
| Ton Bu. Cwt. Bu. Lbs.Beef Lbs.Beef | | τυητ. (μ) |
| | 3 | (5) : Production: Per Acre: |
| 7,028.87 38,454 14,375 168,390 89,004 120,855 63,607 980,095 | 800 860 | (6) Total |
| 4 2005 2005 2007 2007 2007 2007 2007 2007 | Dollars | : (7) : (8) :Value of production :Per Unit : Total |
| 1,72,40 142,820 55,758 53,906 387,297 80,104 24,232 97,318 196,509 15,132 15,132 | Dollars | |
| 38 24 87,64 20,09 2,62 2,62 | Dollars: | : (9) : (10) Cost of producti Per Acre: Total |
| 32,316: 23,442 50,393: 3,513 202,943:184,354 59,088: 21,016 58,878: 38,440 58,878: 38,440 138,495: 58,014 9,031: 6,101 2,624,764:680,7775/ 681,6306/ | Dollars: Dollars :Dollars | : (9) : (10) : (11) :Cost of production: Net :Per Acre: Total :Return |

| Farmsteads, farm roads, waste and non-agricultural

Parenthetical amounts are duplicated acreages

Calculated from Columns 3 and 6; rounded to nearest unit

Adjusted to eliminate negative net return

Total area Zone A reduced by 1,043 acres urban, 6,632 acres woodland not anticipated to be cleared, and 51,504 acres already drained, not requiring drainage or not anticipated to be drained.

State: Basin: St. Francis River Project: Arkansas Ditch #

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PRODUCTION CUSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT ZONE FOR DRAINAGE CALCULATIONS ONLY, COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION SUMMARY - TABLE IV A

(Based on projected prices)

| | | | | | | | | | | | | | | | All | | Unit | Soil | (1) | |
|---|----------------------|-----------|-----------|--------|---------------|---------------|---------------------|----------------|------------|------------|----------|--------------|-------------|---------|--------------|---------------------------|------------------|--------------------------|---------|--|
| | TOTAL | Woodland | : Other 1 | : Idle | Perm. Pasture | Grain Sorghum | : Oats (Sup. Past.) | : Oats (Grain) | Soybeans | Rice | : Corn | : Cottonseed | Cotton | : Crops | Open Land | | distribution | Land use and crop | (2) | |
| | : 49,089 5/: | | 4,909 | 2,617 | 4,962 | 3,093 | (1,765) | 3,594 | 7,388 | 653 | 918 | (20,955) | 20,955 | 14,180 | 49,089 | | Acres | 2/ | (3) | |
| 1 | •• | : Acres | 4 | •• | :Lbs.Beef | : Bu. | :Lbs.Beef | : Bu. | · Bu · | : Cut. | Bu. | : Ton | :Lbs.Lint | | •• | · •• | : Unit | | (4) | |
| | •• | ••• •• | •• | •• | : 371 | . 22 | : 118 | : 42 | : 26 | • • | . 59 | :.5575 | : 619 | | •• | | Per Acre: | Production | : (5) | |
| | | : | | | 1,842,125 | 67,641 | 208,855 | 560°05T | 193,115 | 22,855 | 53,734 | . 11,683.09 | 12,981,205 | ~ . | <i>U</i> = 1 | | Total | | (6) | |
| | •• | •• | •• | •• | 2005 | 1.53 | 2005 | . 90 | 2.30 | 3.75 | 1.45 | : 63.00 | · 25 | •• | •• | Dollars | :Per Unit | :Value of production | : (7) | |
| | 5,238,919 | •• | | •• | : 369,346 | : 103,491 | : 41,875 | 135,085 | : 444, 165 | 85,706 | : 77,914 | : 736,035 | :3,245,302 | | •• | Dollars | : Total | production | : (8) | |
| | •• | •• | •• | •• | : 49.87: | : 20,19: | : 10.56: | : 25.59 : | : 30.90: | : 111.17 : | : 48.63: | •• | : 158.24 : | F. | •• | : Dollars: | :Per Acre: Total | :Cost of p | : (9) : | |
| | :4,082,101:1,156,818 | •• | •• | •• | 247,473: | 62,460: | 18,645: | 91,972: | 228,309: | 72,594: | 44,639: | •• | :3,316,009: | •• | •• | Dollars: Dollars :Dollars | | :Cost of production: Net | : (OI) | |
| | 9156,818 | | | • | 121,873 | 41,031 | 23,230 | الم و المولا | 215,856,5 | 13,112 | 33,275 | | 665,328 | | | ollars | Return | Net | (11) | |

Farmsteads, farm roads, waste and non-agricultural Parenthetical amounts are duplicated acreages

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent fortal area Zone A reduced by 1,043 acres urban, 6,632 acr

Calculated from Columns 3 and 10; rounded to nearest cent Total area Zone A reduced by 1,043 acres urban, 6,632 acres woodland not anticipated to be

cleared, and 51,504 acres already drained, not requiring drainage or not anticipated to be drained.

Basin: St. Francis River Project: Ditch # 10
State: Arkansas

SUMMARY - TABLE II B ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1): (2) Soil: Land use and crop Unit: distribution | (3) (4) 2/ : Unit | : (5) : (6) Production :Per Acre: Total |
|---|----------------------|---|
| OUT 0 . CTS OLT DROTOIL | . Acres : Unit | Her Wores Toogr |
| All : Open land : Crops | 38,061 34,255 | 3/: |
| : Cotton | : 14,233 :Lbs.lin | t: 395 :5,623,500 |
| Cottonseed | :(14,233): Ton | |
| : Corn | 1 1,08 Bus | : 44 : 61,952 |
| : Rice | : 158 : Cwt. | |
| : Soybeans | 9,627 : Bus | 23 : 225,005 |
| : Oats (Grain) | | : 30 : 62,626 |
| | | |
| : Oats (Sup. Past.) | (701) :Lbs.Bee | |
| : Grain Sorghum | : 1,228 : Buo | : 20 : 24,254 |
| : Permo Pasture | 845 :Lbs.Bee | f: 195 : 164,775 |
| : Idle | : 4,635 : | • |
| : Other 1/ | : 3,806 : | : |
| : Woodland | : 1,895 : Acres | : |
| moma T | 10 05(1) | * |
| : TOTAL | : 39,956 <u>L</u> /: | 43 |
| * | : :: | : |

^{1/} Farmsteads, farm roads, waste and non-agricultural 2/ Parenthetical amounts are duplicated acreages 3/ Calculated from Columns 3 and 6; rounded to nearest unit 1/ Total area Zone B reduced by 256 acres water.

Basin: Sto Francis River Project: Ditch # 10 State: Arkansas

SUMMARY - TABLE III B

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS (Based on projected prices)

| | 2. | £ | Unit | (1). Soil |
|--------------------|----------|---|-----------------|---------------------------------|
| TOTAL | Other 1/ | Open land Crops Cotton Cottonseed Corn Rice Soybeans Oats (Grain) Oats (Sup. Past.) Grain Sorghum Perm. Pasture | distribution | (2) Land use and crop |
| : 39,590 5/ | 3,863 | 38,638 34,775 17,229 (17,229) 1,249 7,340 2,682 2,682 1,016 | Acres | (3) |
| | : Acres | Lbs.Lint Ton Bu. Cwt. Bu. Lbs.Beef Bu. | Unit | |
| •• 4 | •• •• •• | 475 32 4272 49 38 38 28 271 | :Per Acre: | : (5) : |
| • | 1 | 8,177,410 7,359,67 61,556 5,088 202,866 97,292 62,500 26,733 275,250 | Total | (6) |
| -, - | 3.88 | 2003 | Per Unit | : (7) : (8) Value of production |
| :3,282,815 | 3,694 | 2,044,352 463,659 89,256 19,080 466,592 87,563 12,531 40,901 | · Total | : (8) roduction |
| 4 - | 2,30 | | Per Acre: Total | Cost of p |
| 2,604,142: 678,673 | 2,189 | 2,168,701: 339,310 53,785: 35,471 16,604: 231,746 234,846: 231,746 60,240: 27,323 5,640: 6,891 24,036: 16,865 38,101: 17,086 | 2 | : (9) : (10) : |
| 678,673 | 1,505 | 339,310 35,471 2,476 231,746 7 27,323 5 16,865 17,086 | Return | Net |

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent Parenthetical amounts are duplicated acreages Total area Zone B reduced by 256 acres water and 366 acres woodland not anticipated Farmsteads, farm roads, white and for-agricultural

to be cleared.

Basin: St. Francis River Project: Ditch # 10 State: Arkansas

SUMMARY - TABLE IV B

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS (Based on projected prices)

| | 4 | | | | | | All | Unit | Soil | |
|---------------------|------------|--------------------|--|----------------------|------------------------|---------------------------|-----------------------------|------------------|----------------------|--------|
| TOTAL | Other 1/ | v D | : Oats (Grain) : Oats (Sup. Past.) | : Rice : Soybeans | : Cottonseed | : Crops | : Open land | * distribution | : Land use and crop | * (2) |
| : 39,590 5/: | 3,958 | 1,011 | 2,639 (648) | 164 | 19,442) 1,336 | 19,442 | 39,590 | : Acres | 2/ | (3) |
| | Acres | : Bu, :Lbs,Beef | Lbs Beef | Bu. | Fu. | :Lbs Lint | •• •• | : Unit | 1 | (4) |
| | ÷• •• •• | 325 | ## ## ## ## ## ## ## ## ## ## ## ## ## | 22 <u>W</u> | | 622 | ••• | Per Acre | Production: | · (5) |
| | | 34,291 | 120,000 | 234,001 | 10,883,55 | 12,092,840 | | Total | | (6) |
| •• | 20 49 44 | 2005 | . 2005 | 2,30 | 1,45 | | Dollars | :Per Unit | :Value of production | : (7) |
| :4,639,325 | | 73,795 | | •• •• | : 685,663 : 119,532 | w ** | Dollars | : Total | roduction | (8) |
| • | *** *** ** | 21.94: | 27.76: | 108 p.92 : | \$5°27: | 161,58: | Dollars | :Per Acre: Total | :Cost of production: | : (5): |
| :3,664,066: 975,259 | ** ** ** | | 73,249: | | 73,836: | 161,58:3,141,460: 567,413 | Dollars : Dollars : Dollars | _ | roduction: | (OL) |
| 975,259 | | 21,993 | 31,751 | 263,691 258 | _ | 567,413 | ollars | :Return | Net | (11) |

Farmsteads, farm roads, waste and non-agricultural
Parenthetical amounts are duplicated acreages
Calculated from Columns 3 and 6: rounded to nearest unit

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent

Total area Zone B reduced by 256 acres water and 366 acres woodland not anticipated to be cleared.

- 258 -

State: Project: Ditch # 10 Arkansas

PROJECT AREA SUMMARY BY SOIL MAPPING UNITS TABLE V

| TOTAL | Subtotal | 144 | | Subtotal | 10 | 9 + | با- | **** | Soil | (I) |
|------------------------|----------------------|---------------------------------|-----------------------|----------------------|-----------|----------|-------------|---|-----------------------|------------------------|
| •• | | • •• •• •• | | •• | • •• | •• •• | •• | | | •• •• |
| 88,679 | 39,590 3/ | 6,053 32,543 994 | | 49,089 2/ | 14,517 | 1,015 | 1,718 | | Acres | (2) |
| :6,588,356 | 39,590 3/ :3,282,815 | 309,605 | | 49,089 2/ :3,305,541 | : 542,965 | : 66,362 | : 60,434 | ga de | : (Produc | (3) Futur |
| : 5,228,906 | : 2,604,142 | 267,320 | | : 2,624,764 | 457, 135 | 53,996 | 54,036 | ; ; ; | ross : Cost : | Future Without Project |
| :1,360,303 | 678,673 | 42,285 610,759 25,629 | ZONE B - | 681,630 | 85,830 | 12,366 | : 7,251 1/: | ZONE A - | rs) Net | ; (5) |
| . 9,878,244 | 4,639,325 | 551,653 3,957,432 130,240 | (subject to flooding) | 5,238,919 | 180,746 | 100,244 | 160 | ZONE A - (not subject to flooding) | Gross | (6) Future |
| : 7,746,167 :2,132,077 | 3,664,066 | 464,539 3,094,916 104,611 | flooding) | : 4,082,101 | 728,879 | 83,981 | 132,187 | to flooding) | Production in Dollars | Future With Project |
| :2,132,077 | 975,259 | 87,114 862,516 25,629 | : | 1,156,818 | : 218,202 | 16,263 | : 27,849 | | rs) | t (8) |
| 772,774 | 296,586 | 14,829 251,757 | 'n | 475,188 | 132,372 | | 20,598 1 | | in Net Production | (9) Difference |
| | | | - 25 | 9 - | | | | | | |

Adjusted to eliminate negative net return

^{2/} Total area Zone A reduced by 1,043 acres urban, 6,632 acres woodland not anticipated to be cleared, and 51,504 acres already drained, not requiring drainage or not anticipated to be drained.
3/ Total area Zone B reduced by 256 acres water and 366 acres woodland not anticipated to be cleared.

Basin: St. Francis River Project: Ditch # 10

State: Arkansas

TABLE VI LAND CONVERSION WITH PROJECT

| (1) | : (2) | : (3) | : (4) | : (5) |
|---------------------------|----------|-----------|------------|-----------|
| | • | : Cost | : Cost | * |
| Type of 7/ | : Total | : of | : of | : Total |
| Conversion = | : Amount | :Clearing | :Smoothing | : Cost |
| | : Acres | : Dollars | : Dollars | : Dollars |
| Per Acre | : | : | | : |
| W to GC | : XX | : 60 | : 15 | : 200 |
| W to IC | XX · | 60 | : 15 | * XX |
| W to P | : XX | : 60 | : XX | : XX |
| P to GC | t XX | . XX | | : XX |
| P to IC | : XX | : XX | | 2XX |
| GC to IC | : XX | : XX | : 300 | : XX |
| GC to P | : XX | : XX. | : XX | : XX |
| 40 00 1 | • 3335 | and . | • | • 3325 |
| | 2 , | : | • | • |
| Project | | | | : |
| W to GC | : 3,866 | : 231,960 | : 57,990 | : 289,950 |
| W to IC | 83 | 4,980 | : 1,245 | 6,225 |
| W to P | : 450 | 27,000 | : XX | 27,000 |
| P to GC | : | : XX | : - | . 1,,000 |
| P to IC | | : 200 | | |
| GC to IC | | : XX | : XX | |
| GC to P | | : XX | : XX | |
| | | : | • | |
| | : | : | : | 1. |
| Total project | : xx | : 263,940 | : 59,235 | : 323,175 |
| | : | : | : | * |
| Annual amortized value 2/ | : xx | : 1000 | : xx | : 17,704 |
| | : | : | : | : |
| Total annual cost of | : | : | : | : |
| conversions | : XX | : XX | : xx | : 17,704 |
| | • | • | • | |
| - 1 | | | | |

^{1/} W-woodland; GC-general dry-farmed crops; IC-irrigated crops;
 (rice); P-pasture.
2/ Amortized over 50 years at 5 percent.

Basin: St. Francis River
Project: Ditch # 10
State: Arkansas

TABLE VII
ANALYSIS OF FARM DRAINAGE SYSTEM COSTS

| | | | ₩ | | | | | A | | Zone |
|----------|------------|---------------------|--|----------|--|-------------------|--------------------------------------|--------------------------------------|-----------|----------------------------------|
| TOTAL | Subtotal | : 4 - General crops | : 1 - General crops : 1 - Rice : 1 - Pasture | Subtotal | :10 - General crops :10 - Rice :10 - Pasture | 9 - General crops | : 4 - General crops : 4 - Pasture | : 1 - General crops : 1 - Pasture | •• | : Soil mapping unit and land use |
| 63,560 ¥ | · 19,380 ¥ | 15,856 | 2 ₈ 852 92 | T 081°m | 16,452 653 1,960 | 823 91 | 25,790 | 1,500 | Acres | Area |
| 830,908 | 265,837 | 210,869 | 149 , 3148 791 8147 | 565,071 | 139,001 5,425 16,281 | 741 | 342,981 23,315 | 25,954 428 | Dollars | Total Cost Installation 2/ |
| 80,048 | 25,610 | 20,315 | 4,754 76 82 | 54,438 | 13,391 523 1,569 | 1,054 | 33,043 | 2,500 | Dollars | Annual Equivalent Instl. Cost 3/ |
| 04μετ6 | 30,168 | 24,331 % | 5,694 31 20 | 61,272 | 16,039 209 626 | 1,263 | 39,575 | 2,995 | : Dollars | Annual Maintenance Cost |
| 171,488 | 55,778 | 52.7 979.6*m | 10,446 107 102 | 115,710 | 29,430 | 2,317 | 72,618 2,784 | 25,495 | Dollars | Total Annual Cost |

Does not include 10 percent "other" land 2/ Includes engineering and contingency 3/ Amortized at 5 percent over 15 years.

Basin: St. Francis River

Project: Ditch # 10 State: Arkansas

TABLE VIII ANALYSIS OF GROUP DRAINAGE NEEDS AND COSTS

| Item Unit | : Amount : | Unit : | Total Cost | |
|---|------------------|----------|---------------|---------------------------------------|
| Excavation 1/ | 7. 1. | Dollars: | Dollars | 1 4 % |
| Spreading spoil 1/: | es: | ~ · | | |
| Clearing right-of-way 1/ :Cubic Yard | 1:346,000: | 0.20: | 69,200 | |
| Right-of-way easements : Acres | 27: | 30.00: | 810 | 1. 1. 7. |
| Crossings | 30:4 5 1 30:4 | 400.00 | 12,000 | |
| Swinging water gaps : Each | 20: | 50.00: | 1,000 | |
| Pipe drop structures Each | 15: | 200.00 | 3,000 | |
| Flap gates : Each | 10: | 1,00.00: | ·· 1,000 | |
| Vegetative plantings : Acres | 22: | 8.00: | 176 | C. |
| Total construction cost : xx | : XXX : | xx : | 87,186 | |
| | | : | | |
| Engineering cost | " :" " XX ": | xx : | 8,719 | • • • |
| Contingencies and legal : xx | i xx : | × XX | 8,719 | |
| Total installation cost | 400 3 | | 104,624 | |
| Annual equivalent - installation cos (amortized for 30 years at 32 perce | | | 5,688 | , , , , , , , , , , , , , , , , , , , |
| Annual maintenance cost | | | 4,359 | |
| Annual loss of production - right-of | way 2/ | | 138 | |
| Total annual cost of required group | | rujen si | 10,185 | |

These items included in excavation costs under normal contract procedures.

^{2/} Annual loss of production - right-of-way. 9 acres @ \$15.31 per acre.

Basin: St. Francis River

Project: Ditch # 10

State: Arkansas

TABLE IX SUMMARY OF ANNUAL NET PRODUCTION RETURNS AND ASSOCIATED COSTS

| | (1) | (2) | : (3) : Discounted |
|----------|---|-------------------------------------|----------------------------------|
| | Item | Total | : Amount |
| 1. 2. 3. | Net return with project Net return without project Gross benefit to project | Dollars 2,132,077 1,360,303 771,774 | : Dollars : xx : xx : 479,441 2/ |
| 4. | Farm drainage cost a. Installation cost b. Maintenance cost c. Total | xx 80,048 91,440 171,488 | xx 2/ xx xx 106,532 |
| 5. | Group drainage cost a. Installation cost b. Maintenance cost 1/ c. Total | 5,688 4,497 10,185 | xx 3/ xx xx 8,458 |
| 6. | Conversion cost a. Installation cost b. Maintenance cost c. Total | 17,704 | xx 2/ xx xx 10,998 |

to full installation, maintenance, and benefit accrual.

^{1/} Includes loss of production, right-of-way
2/ Discounted at 5 percent to account for estimated 20 year lag to full installation, maintenance, and benefit accrual.

3/ Discounted at 3½ percent to account for estimated 10 year lag

Basin: St. Francis River
Project: Ditch # 123
Reach: 1
State: Arkansas

TABLE I
PRESENT LAND USE

| Zone sping un | p=: Open it:(Acres) | | : Urban :V : (Acres): | | : Total :(Acres) |
|----------------------------------|------------------------|------------|--------------------------|------------|---------------------|
| Zone A 4 | 102 | 1 - | - | - | 102 |
| Subtotal = all soils Urban Water | 102 | 3 | | | : 102 |
| Total - Zone A | : 102 | | | / - | 102 |
| Zone B : 4 | 9,891 | 922 | 8 | ess | : 10,813 |
| Subtotal - all soils | 9,891 | 922 | : - : | - | : 10,813 |
| Urban Water | : - | | | 80 | : 80 |
| Total - Zone B | 9,891 | 922 | - | | 10,893 |
| GRAND TOTAL → Reach 1 | 9,993 | 922 | | 80 | 10,995 |

Basin: St. Francis River
Project: Ditch # 123
Reach: 1
State: Arkansas

TABLE II A 1/

ZONE FOR DRAINAGE CALCULATIONS ONLY

COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1): (2) Soil: Land use and crop Unit: distribution | (3) : (4) 3/: Acres : Unit | Production Per Acre: Total |
|---|---|----------------------------|
| crops Cotton Cottonseed Other Woodland TOTAL | 102 92 92 Lbs.Lint (92) Ton 10 Acres | : 3645 : 33.53 |

1/ One soil only; no summary required
2/ Farmsteads, farmroads, waste and non-agricultural
3/ Parenthetical amounts are duplicated acreages.

Pro Read Stat Basin

| | | | | | | | ed | nary require | One soil only: no summary required | 1/ One : |
|--------------|---------------|-----------------------------------|---------------|--|-------------------|---|------------|--------------|------------------------------------|----------|
| •• | | •• | | | • | •• | 00 | | | •• |
| \$ 666 | 3,652 : 666 | ¹ | 4,318 | | | •• | 7 | 35 4 | TOTAL : | ** |
| 00 | | •• | ** | •• | | •• | * Acres | | Woodland - * | ·M.* |
| •• | | •• | , | | | | •• | 3 | Other 2/ | ** |
| •• | • | 00 | 798 | \$ 63 ₀ 00 \$ | 12.67 | \$.3960 \$ | * Ton | (32) | Cottonseed : | ** |
| 3 666 | 3,652 | : 114.14 : | 3,520 | . 25: | 14,080 | t: 440 s | tnil.sdls. | 32 | Cotton | •• |
| •• | | 00 | | •• | | 4. | •• | 32 | Crops : | ** |
| ** | | ** | | | | •• | • | 35 | Open land : | 4 |
| Dollars | Dollars | Dollars : Dollars : Dollars | Dollars | Dollars : | | •• | •• | | | |
| Return | Total | :Per Acre: Total :Return | * Total | Per Unit | Total | Per Acres | * Unit | Acres | distribution | Unit : |
| *Net | roduction | :Cost of p | production | *Value of production : Cost of production: Net | | Production | ** | 13 | Land use and crop : | ** |
| : (11) | : (10) : (11) | 1 (9) 1 | (8) | 3 (7) 3 | (6) | : (5): | : (4) | (3) | (2) | |
| | | | | | H | | | | | |
| | | | Ces) | ٥ ا | ased on pr | (B): | | | | |
| | JECT | FUTURE CONDITIONS WITHOUT PROJECT | W SNOITIONS W | FUTURE CC | T RETURNS: | COSTS AND NET RETURNS: | | | Arkansas | State: |
| | DUCTION | ICTION. PRO | E CF FRODU | CTION. VALU | URAL PRODU | COMPUTATION OF AGRICULTURAL PRODUCTION. VALUE OF FRODUCTION. PRODUCTION | MPUTATION | CO | jud | Reach: |
| | | | IS ONLY | CALCULATIONS ONLY | ZONE FOR DRAINAGE | ZONE FOR | | | Ditch # 123 | Project: |
| | | | | TT A T/ | TABLE | , · | | | ore Francis utver | BRETHE |

THOROTH

Parenthetical amounts are duplicated acreages.

Total area zone A reduced by 67 acres drained without the project.

Farmsteads, farm roads, waste and non-agricultural

ne_ 100 .

Basin:
Project:
Project:
Reach:

St. Francis River
Ditch # 123
Reach:
Arkansas

ZENE FOR DRAINAGE CALCULATIONS ONLY

COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION, PRODUCTION COSTS AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT

(Based on projected prices)

| T | | | | | | | | 4 | | Unit | Soil | (1) | |
|------------------------------------|-----|-------------|-------|----------|-----------------------|------------|-----------|-------------|--------------------|------------------|---|----------|---|
| One soil only; no summary required | •• | * TOTAL | | other 2/ | ~ | * Cotton | * Crops | * Open land | ** | * distribution | * Land use and crop | : (2) | |
| ary required | | 35 4/ | • | ** .3 | 3 (32) | 32 | 32 | 35 | •• | * Acres | 3 | : (3) | |
| | | | Acres | •• | # Ton | *Lbs.Lint | : | •• | | * Unit | •• | : (4) | |
| | | •• | : | •• | * _• 5085 * | 565 * | : | •• | •• | Per Acres . | Production | : (5) : | |
| | | | : | | 16.27 | 18,080 | : : : : : | | | Total | | (6) | |
| | •• | •• | •• | •• | 3 63,00 | 25 | | ** | :Dollars | Per Unit | Walue of | 1 (7) | |
| | . 1 | 5,545 | •• | •• | 1,025 | 4,520 | ** | | : Dollars | : Total | : Value of production : Cost of production: Net | : (8) | • |
| | •• | •• | •• | •• | •• | : 147,09 : | •• | | :Dollars : Dollars | :Per Acre: Total | :Cost of p | : (9) : | |
| | •• | 4.707 : 838 | •• | •4 | •• | 4,707 | •• | | 44 5 | Total : | roduction: | : (10) : | |
| | | 838 | | | | 838 | 26' | 7- | Dollars | Return | Net | (11) | |

Farmsteads, farm roads, waste and non-agricultural
Parenthetical amounts are duplicated acreages. Total area zone A reduced by 67 acres drained without the project.

St. Francis River Basin: Ditch # 123 Projects Reach: State: Arkansas

TABLE II B ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1): | (2) | : (3) | : (4) : | (5) : | (6) |
|--------|-------------------|--------------|------------|-----------|-----------|
| Soil a | Land use and crop | : 3/ | Pi | roduction | |
| Unit : | distribution | : Acres | : Unit : | Per Acres | Total |
| | | -\$ | ** * * | | |
| 4 | Open land | : 9,891 | 1 1 | | |
| 1 | Crops | : 8,902 | | 4/8 | |
| 1 | Cotto n | : 3,740 | :Lbs.Lint: | 415 | 1,552,100 |
| 1 | Cottonseed | :(3,740) | : Ton : | 3735 | 1,396,89 |
| 1 | Corn | : 356 | 1. Bu. 1 | 44 8 | 15,664 |
| 1 | Soybeans | : 2,225 | # Bue # | 25 : | 55,625 |
| 1 | Oats (Grain) | : - 801 | * Bu : | 34 \$ | 27,234 |
| : | Oats (SupePast.) | (80) | :Lbs.Beef: | 75 : | 6,000 |
| 1 | Grain Sorghum | \$ 267 | | 20 3 | 5,340 |
| 4 | Perm. Pasture | : 890 | :Lbs.Beef: | 190 : | 169,100 |
| | Idle | 8 623 | : | | |
| | Other 2/ | : 989 | 1 1 | • | |
| | Woodland | s - 922 · | Acres : | , | |
| | TOTAL | :10,813, | | | |
| | 44 | 5 | | | |
| - | | • | • | • | |

One soil only; no summary required
Farmsteads, farm roads, waste and non-agricultural
Parenthetical amounts are duplicated acreages.

5.78 percent cropland drained.

Total area zone B reduced by 80 acres water.

| 2/2 | 44 | Basin: Project: Reach: State: State: Unit: |
|---|--|---|
| One soil only; no summary required Farmsteads, farm roads, waste and non-agricultural | Open land Crops Cotton Cottonseed Corn Rice Soybeans Oats (Grain) Oats (Sup.Past.) Grain Sorghum Perm. Pasture Idle Other 2/ Woodland TOTAL | St. Francis River Ditch # 123 Arkansas Results (2) Land use and crop sedistribution |
| m roads, waste and n | 10,168 9,151 4,575 (4,575) 326 2,288 640 (320) 275 275 275 275 275 275 275 275 275 | Acres Pr |
| nd non-agri | Lbs.Lint Fon Bu Cwt Bu Bu Bu Lbs.Beef Acres | ZONE FOR COMPUTATION OF PRODUCTION COSTS, (4) 8 (9 (4) 8 (10 Prod 10 Per |
| cultural | 5580 5580 5580 5580 5580 5580 5580 5580 | I c en |
| | 2,653,500 2,388,15 21,228 9,075 66,352 27,520 43,200 6,875 88,000 | TABLE II DRAINAGE AND FLO AGRICULTURAL PRO AND NET RETURNS: (Based on proj totion Acres Total |
| | 63.00 a 25 a 2.30 a 2.30 a 2.005 a 2.0 | TABLE III B 1/ DRAINAGE AND FLOOD CONTROL CALCULATIONS AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION, AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT (Based on projected prices) |
| | 663,375 150,453 30,781 34,031 152,610 24,768 8,662 10,519 17,644 17,644 | B 1/ CONTROL CALCULATIONS CTION, VALUE OF PRODUCTION, FUTURE CONDITIONS "ITHOUT PROJECT ted prices) (7) ; (8) ; (9) ; alue of production :Cost of product of production :Per Acres To |
| | 154.57 : 707,15 154.57 : 707,15 106.67 : 29,33 33.06 : 75,64 26.13 : 16,72 12.36 : 3,95 22.13 : 6,08 43.61 : 11,99 2.62 : 1,43 871,21 | NS DUCTION, ITHOUT PRO: |
| | 0 0448000 | JECT (10): coduction: Total: |
| | 106,670 11,892 4,697 76,969 8,045 4,707 4,433 5,651 970 224,034 | (11) Net Return |

52.81 percent cropland drained. Parenthetical amounts are duplicated acreages.

50 percent cotton, 30 percent corn on drained land irrigated

[किनिकि Total area zone B reduced by 80 acres water and 97 acres woodland not anticipated to be cleared.

State: leach: Project: Basin: St. Francis River Ditch # 123 Arkansas

> PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS (Based on projected prices)

| 108.92 : 21,022; 3,585 33.06 : 70,153; 71,384 29.87 : 20,162; 9,605 14.50 : 4,886; 5,587 22.13 : 6,396; 4,658 50.34 : 14,548; 7,181 :1,089,693; 305,103 |
|---|
| 33.06 |
| [72 ₀ 05 |
| Dollars :Dollars |
| :Cost of pi |

| State: | Reach: | Project: | Basin: |
|----------|--------|-------------|-------------------|
| Arkansas | 1 | Ditch # 123 | St. Francis River |

REACH SUMMARY BY SOIL MAPPING UNITS

| TOTAL : | Subtotal : | ₩ | Subtotal : | 44 | (1) : Soil : Unit : |
|---------------|---------------------|-----------------|--------------|---------------------|---|
| 10,751 | 10,716 2/:1,095,249 | 10,716 | 35 <u>1/</u> | 35 | (2) |
| :1,099,567 | 1,095,249 | 1,095,249 | 4,318 | 4,318 | (3) Future (Produc Gross |
| 874,867 | 871,215 | 871,215 | 3,652 | 3,652 | 3) : (4) : Future Without Project (Production In Dollars) ss : Cost : |
| 224,700 | 224,034 | 224,034 | 666 | ZONE A | ject ars) |
| 1,400,341 | 1,394,796 | 1,394,796 | 5 545 | - (not subje | : (6) Futu : (Produ |
| :1,094,400 ·· | :1,089,693 | ,796 :1,089,693 | 545 4,707 | subject to flooding | Future With Project (Production In Dollars) |
| 305,941 | :305,103 | 305,103 | 838 | 838 | ct ars) |
| 8 81,241 | 81,069 | 8 81,069 | 172 | . 172 | : (9) : Difference in : Net Production |
| | -27 | 1- | ** | · · · | in |

Total area zone A reduced by 67 acres drained without the project
Total area zone B reduced by 80 acres water and 97 acres woodland not anticipated to be cleared.

F

Basin: Project: Reach: State:

St. Francis River Ditch # 123 Arkansas

TABLE VI LAND CONVERSIONS WITH PROJECT

| (1) Type of Conversions 1/ | (2) Total Amount Acres | (3) Cost of Clearing Dollars | : (4) : Cost of : Smoothing : Dollars | (5) Total Cost Dollars |
|---|----------------------------|---------------------------------------|--|------------------------|
| W To GC W to IC W to P P to GC P to IC GC to IC GC to P | XX XX XX XX XX | 60 60 xx xx xx xx | 15 | XX XX XX XX XX |
| Project W to GC W to IC W to P P to GC P to IC GC to IC GC to P | 534 14 | 32,040 840 xx xx xx xx | 8,010 xx xx xx xx xx | 40,050 840 |
| Total project | ХХ | 32,880 | : 8,010 | 40,890 |
| Annual amortized value 2/ | XX I | xx j | * | 2,240 |
| conversions | ** | xx | t xx | 2,240 |

W- woodland; GC - general dry-farmed crops; IC - irrigated crops; (rice); P - pasture.
Amortized over 50 years at 5 percent.

| 3 | State: | Project: | Basin: |
|---|----------|-------------|-------------------|
| : | Arkansas | Ditch # 123 | St. Francis River |

TABLE VII ANALYSIS OF FARM DRAINAGE SYSTEM COSTS

| 1/ Does | | | 89 | | A | Zone | (1) |
|--|-----------|------------|--|------------|---------------------|---------------------|---------|
| Does not include 10 percent "other" land | TOTAL | * Subtotal | # 4 - General crops # 4 - Rice # 4 - Pasture | * Subtotal | : 4 - General crops | * Soil mapping unit | (2) |
| ther" land | 3,881 1/: | 3,849 1/: | 3,705 29 115 | 32 | Acres 32 | * Area | : (3) |
| | 50,884 | 50,459 | 49,272 251 936 | 425 | Dollars 425 | :Installation 2/ | : Total |
| | 4,902 | 4,861 | 4,747 24 90 | 41 | Dollars 41 | :Instl.Cost 3/ | ; (5) |
| | 5,766 | 5,717 | 5,685 | 49 | pollars 49 | : Maintenance | : (6) |
| | 10,668 | 10,578 | 10,432 34 112 | 90 | Dollars 90 | : Annual : Cost | : (7) |
| 1 | | | | . (, | o | 74. | |

Includes engineering and contingency Amortized over 15 years at 5 percent

;

Basin: Project: Reach: State: St. Francis River
Ditch # 123

Arkansas

TABLE VIII
ANALYSIS OF GROUP DRAINAGE NEEDS AND COSTS

| | : : | | ; Unit | Total | | | |
|--|---------------|------------|---------------|------------------|--|--|--|
| Item | :. Unit : | Amount | | Cost | | | |
| Excavation 1/ Spreading spoil 1/ Clearing right-of-way 1/ | : Cubic Yard: | 17 300 | Dollars 0.20 | Dollars 3,460 | | | |
| | * *** | 27,000 | 1 | : | | | |
| Right-of-way easements | : Acres | 4 | : 30.00 | 120 | | | |
| Crossings | Each | 3 | 300.00 | 900 | | | |
| Swinging water gaps | Each | 3 | 40.00 | 120 | | | |
| Pipe drop structures | Each : | 1 | 200.00 | 200 | | | |
| Flap gates | Each | 1 | 100.00 | 100 | | | |
| Vegetative plantings . | Acres | 3 , | 8,00 | 24 | | | |
| Total construction cost | i xx | xx | t xx | 4,924 | | | |
| Engineering cost | xx | XX | t XX | 492 | | | |
| Contingencies and legal | xx x | | : XX | 492 | | | |
| Total installation cost. | | | | | | | |
| Annual equivalent - installation cost (amortized for 30 years at $3\frac{1}{2}$ percent) | | | | | | | |
| Annual maintenance cost | | | | 246 | | | |
| Annual loss of production - rig | ht-of-way. | 2/ | | 21 | | | |
| Total annual cost of required g | roup facilit | ies | | 588 | | | |

^{1/} These items included in excavation costs under normal contract procedures.

^{2/} Annual loss of production - right-of-way. 1 acre @ \$20.90 per acre.

Basin: St. Francis River
Project: Ditch # 123
Reach: 1
State: Arkansas

TABLE IX
SUMMARY OF ANNUAL NET PRODUCTION RETURNS
AND ASSOCIATED COSTS

| • | (1) | : (2) | : (3) : Discounted |
|-----------------|---|---|--|
| | Item | . Total | : Amount |
| 2. Net re | turn with project turn without project benefit to project | Dollars 305,941 224,700 81,241 | Dollars xx xx 64,401 2/ |
| a. In b. Mai | rainage cost stallation cost intenance cost tal | xx 4,902 5,766 10,668 | xx 2/ xx xx xx xx 8,457 |
| a. In | drainage cost stallation cost intenance cost 1/ tal | xx 321 267 588 | xx 3/ xx xx xx 488 |
| | stallation cost intenance cost | 2,240 2,240 | xx 2/ xx xx xx 1,776 |

Includes loss of production, right-of-way

3/ Discounted at 3½ percent to account for estimated 10 year lag to full installation, maintenance, and benefit accrual.

^{2/} Discounted at 5 percent to account for estimated 10 year lag to full installation, maintenance, and benefit accrual.

Basin: St. Francis River
Project: Ditch # J23
Reach: 2
State: Arkansas

TABLE I
PRESENT LAND USE

| Zone | :Soil map- :ping vnit | | | | | Total (Acres) |
|--|---------------------------------------|------------------------------------|-----------------------|--------|------------|-------------------------------|
| Zone A | 1 | 1,125 | : 51 : | ••• | e 2 00 | 1,483 15,384 |
| | : 11 | : 10 : 2,251 : 9,727 | | •• | a) | 20 2,251 9,747 |
| Subtotal - a Urban Water Total - Zon | * * * * * * * * * * * * * * * * * * * | :28,446 :28,446 | : 439 : - : 439 | 205 | 37 | 28,885 205 37 29,127 |
| Zone B | 1 1 11 12 | : 1,486 : 6,910 : 89 : 52 | 1,601 178 | | - | 3,087 7,088 89 52 |
| Subtotal - a Urban Water Total - Zone | | : 8,537 : - : 8,537 | : 1,779 | en | 122 122 | 10,316 |
| GRAND TOTAL - Rea | 36,983 | 2,218 | 205 | 159 | 39,565 | |

| | t. Francis | |
|----------|------------|----|
| Project: | Ditch #12 | 23 |
| Reach: | 2 | |
| State: | Arkansas | |

SUMMARY - TABLE II A ZONE FOR DRAINAGE CALCULATIONS ONLY COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1) Soil Unit | (2) Land use and crop distribution | : (3) : 2/ : Acres | (4) F Unit | | | | |
|---------------------|--|---|-------------------------------|------------------------------|---|--|--|
| All | Open land Crops Cotton Cottonseed Soybeans Oats (Grain) Oats (Sup. Past.) Grain Sorghum Perm. Pasture Idle Other 1/ Woodland TOTAL | (6,562) 3,454 1,296 (587) 503 | Bu. Bu. Lbs.Beef Bu. Lbs.Beef | 3563 24 31 70 19 | 2,597,745 2,337,97 82,753 40,677 41,090 9,612 211,140 | | |

1/ Farmsteads, farm roads, waste and non-agricultural
2/ Parenthetical amounts are duplicated acreages
3/ Calculated from Columns 3 and 6; rounded to nearest unit
1/ Total area Zone A reduced by 205 acres urban, 37 acres
water and 12,852 acres already drained or not requiring drainage

Basin: St. Francis River
Project: Ditch # 123
Reach: 2
State: Arkansas

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE CALCULATIONS ONLY (Based on projected prices) SUMMARY - TABLE III A

| TOTAL | : Woodland | : Other 1/ | : Idle : | : Perm. Pasture : | : Grain Sorghum | : Oats (Sup. Past.): | : Oats (Grain) : | : Soybeans : | : Corn | :: Cottonseed : | | : Cotton : | : Crops | All: Open land: | •• | Unit: distribution : | Soil: Land use and crop : | (1): (2) : | |
|--------------------|------------|------------|----------|-------------------|-----------------|----------------------|------------------|--------------|-----------|------------------------|----------|------------|---------|-----------------|-----------|----------------------|---------------------------|--------------|--|
| 6,112 1/ | • | 119 | 318 | 1470 | 315 | (120) | 315 | 1,039 | · Ltu | (2,906) | | 2,906 | 105°5 | 6,112 | | Acres | . 2/ | (3) | |
| ••• | : Acres | | ; | :Lbs Beef | Bu. | :Lbs.Beef | Bu. | Bu. | Bu. | : Ton | ** | :Lbs .Lint | •• | •• | | : Unit | • | : (4) | |
| ** ** | | •• | •• | 235 | 23 | . 164 | <u>y</u> | 26 : | : 46 | : 3741 : | | : 416 :1 | 3/. | •• | •• | :Per Acre: | Production | (5) | |
| | : | | | 110,450 | 7,235 | 12,600 | 9,820 | 26,771 | 6,486 | 1,087,22 | | 1,208,020 | | * | | Total | | (6) | |
| •• | | | •• | 2005 | 1.53 | 2005 | 90 | 2,30 | . J.15 | : 63.00 | •• | . 25 | •• | | Dollars | :Per Unit | :Value of | : (7) | |
| 486,057 | | : | | 22,145 | : 11,070 | 2,526 | 8,838 | : 61,573 | 20466 | ξ64 ₆ 86 :: | | : 302,005 | •• | | Dollars | rotal | alue of production | (8) | |
| •• •• | ••• | •• | •• | : 33.19: | : 20.87 : | : 9.13: | : 19.95 : | : 30.46: | : 38.64 : | •• | •• | : 109.15: | ₩ | | Dollars : | :Per Acre: Total | :Cost of production: | : (9) : | |
| 383,838 : | •• | •• | •• | 15,599: | 6,575 : | 1,096: | 6,283 : | 31,652 : | 8446 | •• | •• | 317,185 : | •• | | Dollars : | Total: | roduction: | : (OT) | |
| :102,219 <u>5/</u> | | | • | 6,546 | 56464 | 1,430 | 2,555 | 29,921 | 3,957 | •• | 53,789 6 | 53,315 5 | | | Dollars | Return | Net | (江) | |
| 1.1 | | | | | | | | - | 70 | | 1 | - | | | | | | | |

278

^{1/} Farmsteads, farm roads, waste and non-agricultural

Parenthetical amounts are duplicated acreages

Calculated from Columns 3 and 6; rounded to nearest unit

^{1/} Calculated from Columns 3 and 10; rounded to nearest cent 5/ Includes calculated negative net return

Adjusted to eliminate negative net return

Total area Zone A reduced by 205 acres urban, 37 acres water, 419 acres woodland not anticipated to be cleared, and 22,354 acres already drained, nor requiring drainage or not anticipated to be drained.

State: Reach: Project: Ditch # 123 St. Francis River Arkansas

PRODUCTION COSTS, AND NET RETURNS: COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE CALCULATIONS ONLY (Based on projected prices) SUMMARY - TABLE IV A FUTURE CONDITIONS WITH PROJECT

| •• | •• | -00 | •• | •• | | •• | •• | •• | •• | •• | •• | •• | All: | | Unit: | Soil: | :(I) |
|---------------------|------------|---------|--------|---------------|-----------------|--------------------|----------------|----------|----------|--------------|------------------|---------|-------------|--------------------|------------------|--|---------|
| TOTAL | Woodland : | Other 1 | Idle : | Perm. Pasture | Grain Sorghum : | Oats (Sup. Past.): | Oats (Grain) : | Soybeans | Corn | Cottonseed : | Cotton : | Crops : | Open land : | | distribution : | Land use and crop : | (2) |
| 6,112 5/: | 1 | 11.9 | 283 | 494 | 259 | (041) | 315 | 1,007 | 157 | (2,986) | 2,986 | 5,501 | 6,112 | | Acres | 2/ | (3) |
| % | : Acres | *** | •• | :Lbs.Beef | · Bu. | :Lbs Beef | : Bu. | : Bu. | .: Bu. | : Ton | :Lbs.Lint | | •• | : | : Unit | | : (1) |
| | •• | •• | •• | •• | •• | •• | : 47 : | 28 : | . 57 . | : •5906 : | 656 : | : 3/: | •• | •• | Per Acre: | Production | : (5) : |
| | | | | 192,490 | 6,451 | 20,600 | щ,870 | 27,955 | 4006 | 1,763.47 | 1,959,410 | | | | Total | | (6) |
| •• | | •• | •• | 2005 : | 1.53 : | 2005 : | 90 : | : 2,30 : | : 1.45 : | : 63,00 : | . 25 : | •• | •• | : Dollars : | Per Unit : | :Value of p | : (7) : |
| 744,282 | | | | 38,594 | 9,870 | 4,131 | 13,383 | 64,296 | | 111,099 | 489,853 | | | Dollars | Total | lalue of production : Cost of production | (8) |
| •• | •• | •• | •• | : 52.13: | : 22.07: | 13.66: | : 28.79: | 32.07: | : 47.65: | | : 167.75: | · F. | •• | : Dollars: Dollars | :Per Acre: Total | :Cost of pi | : (9) : |
| : 583,120 : 161,162 | •• | •• | •• | 25,751: | 5,717: | 1,912: | 9,070: | 32,295 : | 7,481: | •• | 167.75: 500,894: | •• | •• | •• | Total : | roduction: | : (OI) |
| 161,162 | | | | 12,843 | 4,153 | 2,219 | 4,313 | 32,001 | 5,575 | | 100,058 | | | Dollars | Return | Net | (11) |
| | | | | | • | 2' | 79 | - | | | | | | | | | |

Parenthetical amounts are duplicated acreages Farmsteads, farm roads, waste and non-agricultural

Calculated from Columns 3 and 6; rounded to nearest unit

Calculated from Columns 3 and 10; rounded to nearest cent
Total area Zone A reduced by 205 acres urban, 37 acres water, 419 acres woodland not anticipated
to be cleared, and 22,354 acres already drained, not requiring drainage or not anticipated to be drained.

Basin: St. Francis River
Project: Ditch # 123
Reach: 2
State: Arkansas

SUMMARY - TABLE II B ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1): | (2) | : (3) | : (4) | : (5) | : (6) |
|-------|--|--|--|--|---|
| Soil: | Land use and crop | : 2/ | : P | roduction | ٠, |
| Unit: | distribution | : Acres | : Unit | :Per Acre | : Total |
| All | Open land Crops Cotton Cottonseed Corn Rice Soybeans Oats (Grain) Oats (Sup. Past.) Grain Sorghum Perm. Pasture Idle Other 1/ Woodland | 8,537 7,683 3,148 (3,148) 317 40 2,178 477 (160) 281 190 1,052 854 | Lbs.Lint Ton Bu. Cwt. Bu. Eu. Lbs. Bee. Bu. Lbs.Beef | 3/ 380 380 3421 44 30 23 28 75 20 | : Total : : 1,196,690 : 1,077.02 : 13,948 : 1,200 : 50,039 : 13,498 : 12,000 : 5,512 : 35,150 |
| | TOTAL | : 1,779 | : Acres | • | |
| - | | • | 6 P F 4 | • (| |

/ Farmsteads, farm roads, waste and non-agricultural / Parenthetical amounts are duplicated acreages / Calculated from Columns 3 and 6; rounded to nearest unit / Total area Zone B reduced by 122 acres water.

Basin: St. Francis River
Project: Ditch #123
Reach: 2
State: Arkansas

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS (Based on projected prices) SUMMARY - TABLE III B

| 1/ 1 | | | | | All | (1) Soil Unit |
|------|------------------|------------|---|--|----------------|---|
| | TOTAL | : Cther 1/ | : Oats (Grain) : Oats (Sup. Past.): : Grain Sorghum : Perm. Pasture | Cottonseed Corn Rice Soybeans | Open land | : (2) : Land use and crop : : distribution |
| | 9,909 5/ | 913 785 | (120) 264 246 | 1,700 1,700 1,700 | 9,124 | (3) Acres 2/ |
| | •• | Acres | | Lbs Lint Ton Bu. Cwt. Bu. | | (4) |
| | • | 40 00 00 | 135 284 | 27 4315 51 179 179 | | : (5) : Production :Per Acre: |
| | | | 23,633 16,200 6,103 69,805 | 1,926,470 1,733.82 14,973 1,643 15,621 | | (6) |
| | •• | 3.88 | 2005 | 63°00 11°15 2°75 | <u>Dollars</u> | (7) : Value of p |
| | 774,544 | 3,046 | 21,270 3,248 9,337 13,995 | 481,618 109,230 21,711 6,161 104,928 | Dollars . | : (8) of production it : Total |
| | •• •• | 2.30: | 22.44 12.36: 20.97: 38.87: | 129.27: 519.413 45.37: 13.292 102.19: 5.416 31.34: 53.279 | Dollars: | : (9) : (10) :Cost of production :Per Acre: Total |
| | 624,664 :149,880 | 1,805 | 1,483 1,483 5,535 | 519,413 13,292 5,416 53,279 | Dollars | (10) oduction Total |
| | 088ووللد | 1,241 | 6,390 1,765 3,802 4,434 | 71,435 8,419 745 51,649 | Dollars | (11) Net Return |

- 281 -

Calculated from Columns 3 and 6; rounded to nearest unit Parenthetical amounts are duplicated acreages Calculated from Columns 3 and 10; rounded to nearest cent Total area Zone B reduced by 122 acres water and 407 acres woodland not Farmsteads, farm roads, waste and non-agricultural anticipated to be cleared.

Basin: St. Francis River
Project: Ditch # 123
Reach: 2
State: Arkansas

PRODUCTION CUSTS AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS (Based on projected prices) SUMMARY - TABLE IV B

| | 1 | | | | | | LLA | (1) Soil Unit |
|---------------------|----------|-----------------------------|-----------------------------------|-----------------|----------------|-----------|-----------|--|
| TOTAL | Other 1/ | Grain Sorghum Perm. Pasture | Oats (Grain) : Oats (Sup. Past.): | Rice | Corn | Cotton : | Open land | (2) : Land use and crop : distribution : |
| 9,909 5/: | - 991 | 267 | 699 (182) | 74 2.042 | (4,806) 332 | 908 4 | 9,909 | (3) 2/ Acres |
| | Acres | Bu. Lbs.Beef | Bu. Beef | Bu. | Bu. | :Lbs Lint | 800 86 | (4) P |
| | | 3141 | 119 | 27 | 5479 | 609 | | (5) : Production: Per Acre: |
| | • | 8,078 | 30,283 21,700 | 55,250 | 2,633,11 | 2,925,675 | | (6) Total |
| •• | | 2005 | 2005 | 2.30 | 1,45 | 25 | Dollars | (7) Value of p |
| 1,124,263 | | 18,414 | 27,255 | 9,435 | 28,069 | 731,419 | Dollars | (8) production Total |
| | | 21.72 | 26.62 | 108,92 | 52.48 | 157.34: | Dollars: | : (9) : (10) : Cost of production: Per Acre: Total : |
| : 886,350 : 237,913 | | 7,210 | 18,605 509,81 | 8,060 64,493 | 17,423 | 756,195 | Dollars | (10) oduction Total |
| 237,913 | | 5,349 | 2,411 | 62,582 | 10,646 | ott the | Dollars | (11) Net Return |

282

Calculated from Columns 3 and 10; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent Parenthetical amounts are duplicated acreages Total area Zone B reduced by 122 acres water and 407 acres woodland not Farmsteads, farm roads, waste and non-agricultural anticipated to be cleared.

| State: Arkansas | Reach: 2 | Project: Ditch # 123 | Basin: St. Franci |
|-----------------|----------|----------------------|-------------------|
| | | 23 | Francis River |

REACH SUMMARY BY SOIL MAPPING UNITS

| | TOTAL: | Subtotal: | | | Subtotals | - H | • | Soil: Unit: | (T) | |
|-----|---------------------------------|-----------|--------------------|---------------------------------------|-----------|-----------------------|---------------------------|--------------------------------|-------------------------------------|----|
| | 16,021 | 9,909 3/ | 2,751 7,158 | · · · · · · · · · · · · · · · · · · · | 6,112 2/ | 890 5 , 222 | | Acres | (2) | |
| | 1,260,601 1,008,502 | 774,544 | 90,291 684,253 | | 486,057 | 33,2111 | | (Product: | (3) Futu | |
| | 1,008,502 | 624,664 | 80,324 5442,324 | | 383,838 | 29,817 | | (Production in Dollars) | : (4) : (Future Without Project | |
| | : 252,573 | 149,880 | 9,967 | ZONE B | 102,693 | 3,901 1/ | ZONE A | lars) | roject | |
| - | 1,868,545 | 1,124,263 | 230,708 | - (subject to | 7144,282 | 82,931 | - (not subjec | : (Produ | : (6) | |
| | 1,868,545 : 1,469,470 : 399,075 | 886,350 | 192,592 | ct to flooding) | 583,120 | 68,532 514,588 | (not subject to flooding) | (Production in Dollars) | : (7) :: Future With Project | |
| : : | 399,075 | 237,913 | 38,116 | | 161,162 | 14,399 146,763 | | Net | (8) | -0 |
| | 146,502 | 88,033 | 28,149 | | 58,469 | 10,498 1/ | | :Difference in :Net Production | (9) | |
| | | , | | | 283 | | | | | |

Adjusted to eliminate negative net return

NIM Total area Zone a reduced by 205 acres urban, 37 acres water, 419 acres woodland not anticipated to be cleared, and 22,354 acres already drained, not requiring drainage or not anticipated to be drained.

Total area Zone B reduced by 122 acres water and 407 acres woodland not anticipated to be cleared.

Basin: St. Francis River
Project: Ditch # 123
Reach: 2
State: Arkansas

TABLE VI LAND CONVERSIONS WITH PROJECT

| (1) | : (2) | : (3) | : (4) | (5) |
|---------------------------|-----------|-----------|-----------------|---------------|
| 7 7 7 7 -1 | : | : Cost | : Cost | |
| Type of Conversion | : Total | : Of | : of | Total |
| Conversion = | : Amount | :Clearing | :Smoothing | |
| | : Acres | : Dollars | : Dollars | Dollars |
| Per Acre | : | \$1 1/2 m | | |
| W to GC | .; XX | : 60 | : 15 | xx |
| W to IC | : xx | : . 60 | : 15 : | xx |
| W to P | : XX | : 60 | * XX : | xx |
| P to GC | : XX | : XX | : - | XX XX |
| P to IC | : XX. | : XX | : · · · · | 3 XXX ** |
| GC to IC | : XX | : XX | : XX : | S XX |
| GC to P | : XX | : xx | : xx | · xx |
| | : | : | : | |
| | • | | • | |
| Project | • - | • | ` `\$ •• | |
| W to GC | : 743 | : 44,580 | : 11,145 | 55,725 |
| W to IC | : 21 | : 1,260 | : 315 | 1,575 |
| W to P | : 21 | : 1,260 | E XX S | 1,260 |
| P to GC | : - | : XX | | |
| P to IC | : · · · . | : XX | | - |
| GC to IC | : - | : XX | : XX : | |
| GC to P | : 24 | : XX | · xx | - |
| | : | | | |
| Total project | XX | : 47,100 | 11,460 | 58,560 |
| 20 00 m project | ٠ | . 419100 | • 1,19400 | |
| Annual amortized value 2/ | · xx | : XX | xx | 3,208 |
| | · AAA , | • ununu | • | 79200 |
| Total annual cost of | | | | |
| conversions | : XX | : xx | : xxi | 3,208 |
| | | | |),2 00 |
| | | | | |

^{1/} W-woodland; GC-general dry-farmed crops; IC-irrigated crops; (rice); P-pasture.

^{2/} Amortized over 50 years at 5 percent.

Basin: St. Francis River Project: Ditch # 123
Reach: 2 State: Reach: Arkansas

TABLE VII
ANALYSIS OF FARM DRAINAGE SYSTEM COSTS

| . 17. | | . | ₩ | : | | M A | are see | Zone | |
|----------------|----------|--------------------------------------|--|------------|--------------------------------------|--------------------------------------|-----------|--------------------------------|---|
| TOTAL | Subtotal | : 4 - General crops : 4 - Pasture | : 1 - General crops : 1 - Rice : 1 - Pasture | : Subtotal | : 1 - General crops : 1 - Pasture | : 1 - General crops : 1 - Pasture | | Soil mapping unit and land use | |
| 9,729 <u>1</u> | 4,228 ¥ | 2,562 | 1,492 48 47 | 7 TOS'S | կ _չ 230 կ70 | 777 24 | Acres | Area | |
| 135,131 | 61,385 | 34,072 643 | 25,817 415 438 | 73,746 | 56,255 3,824 | 13,կկկ 223 | Dollars | Total Cost 2/ | |
| 13,017 | 5,913 | 3,282 | 2,487 40 42 | 7,104 | 5,120 | 1,295 | Dollars | Annual Equivalent 3/ | |
| 15,086 | 6,951 | 3,931 | 2,979 | 8,135 | . 6,491 . 16,469 | 7,551 | Dollars : | Annual Maintenance Cost | |
| 28,103 | 12,864 | 7 ₉ 213 | 5,466 526 | 15,239 | 11,911 | 2,846 | Dollars | Total Annual Cost | |
| | | | | 285 | - | | | | ľ |

2/ Includes engineering and contingency
3/ Amortized at 5 percent over 15 years Does not include 10 percent "other" land

Basin: St. Francis River
Project: Ditch # 123
Reach: 2
State: Arkansas

TABLE VIII

ANALYSIS OF GROUP DRAINAGE NEEDS AND COSTS

| Item | : Unit | . Amount | Unit Cost | :Total :Cost | | | | | | |
|---|-------------------------------|----------|-----------------|--------------------------|--|--|--|--|--|--|
| Excavation 1/ Spreading spoil 1/ Clearing right-of-way 1/ | : :Cubic Yard | 40,765 | Dollars 0.20 | :Dollars : : 8,153 | | | | | | |
| Right-of-way easements | : Acres | 28 | 30,00 | 840 | | | | | | |
| Crossings | : Each | 6 | 300.00 | : 1,800 | | | | | | |
| Swinging water gaps | : Each | : 6 | 50.00 | : 300 | | | | | | |
| Pipe drop structures | Each | 4 | 200.00 | 800 | | | | | | |
| Flap gates | Each | 2 | 100.00 | 200 | | | | | | |
| Vegetative plantings | Acres | 28 | 8.00 | 224 | | | | | | |
| Total construction cost | : ×xx | xx | xx | :12,317 | | | | | | |
| Engineering cost |) XX | : xx | xx . | : 1,232 | | | | | | |
| Contingencies and legal | XX | XX | xx | : 1,232 | | | | | | |
| Total installation cost | | | | :14,781 | | | | | | |
| Annual equivalent - installat (amortized for 30 years at 3 | | | | 804 | | | | | | |
| Annual maintenance cost | Annual maintenance cost : 616 | | | | | | | | | |
| Annual loss of production - right-of-way 2/ | | | | | | | | | | |
| Total annual cost of required | group facili | ties | | 1,530 | | | | | | |

^{1/} These items included in excavation costs under normal contract procedures.

^{2/} Annual loss of production - right-of-way. 7 acres @ \$15.77 per acre.

Basin: St. Francis River
Project: Ditch # 123
Reach: 2
State: Arkansas

TABLE IX
SUMMARY OF ANNUAL NET PRODUCTION RETURNS
AND ASSOCIATED COSTS

13.2

| 1 | | 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1 | (F. Comments |
|---------|--|--|-------------------|
| | (1) | (2) | (3) |
| . : | The second of th | : | Discounted |
| 4 1 | Item | : Total | amount |
| | | Dollars | Dollars |
| 1. | Net return with project | 399,075 | 200 |
| | Net return without project | 252,573 | 3000 |
| 9 ' | Gross benefit to project | 146,502 | 116,134 2/ |
| | | | |
| * *** | | | and the second |
| 40: | Farm drainage cost | XX | xx 2/ |
| , | a. Installation cost | : 13,017 | XXX |
| 36 4 | b. Maintenance cost | : 15,086 | Bright XX |
| , | c. Total | 28,103 | 22,278 |
| | The second of the second of the second | | |
| 50, | Group drainage cost | : XX | xx <u>3</u> / |
| | a. Installation cost | 3 804 3 | XX |
| * *** | b. Maintenance Cost 1/ | 726 | to graph of XXX |
| | c. Total, . ; ; | 1,530 | 271 |
| , : | 2 1 4 4 4 4 4 4 4 34 | | 1,34 |
| 6.1 | Conversion cost | 1 XX - 1 + 9 1 | $x = \frac{2}{2}$ |
| : | a. Installation cost | 3,208 | xx |
| , Al. 3 | b. Maintenance cost | a see To a see To a see To a | S. C. XX |
| : | c. Total | 3,208 | 2,543 |
| , " | | | |

1/ Includes loss of production, right-of-way

2/ Discounted at 5 percent to account for estimated 10 year lag to full installation, maintenance, and benefit accrual.

^{3/} Discounted at $3\frac{1}{2}$ percent to account for estimated 10 year lag to full installation, maintenance, and benefit accrual.

Basin: Project: State: St. Francis River
Big Bay Ditch # 1
Arkansas

TABLE I PRESENT LAND USE

| | Soil map- | | : Wooded | | | |
|--|------------|----------|------------------|----------------|------------|---------|
| Zone | sping unit | (Acres) | : (Acres) | (Acres) | (Acres) | (Acres) |
| | ; | \$ | \$ | | : | |
| Zone A | : 4 | :17,992 | : 2,386 | - | : - : | 20,378 |
| والمفاح والمصعد بالمعواصين | | : 3,119 | • | | : - : | 4,120 |
| The second secon | 1 | 2.745 | | | 1 | 3,071 |
| 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1 | | : 1,348 | | | | 1,517 |
| | | 7.399 | | | | 8,186 |
| | | 2,753 | | | | |
| | | | | | 3 ° | 2,809 |
| : | | : 2,978 | | | | 2,997 |
| | 15 S | 2,247 | | | : · | 3,595 |
| Subtotal - a | ll soils | :40,581 | 6,092 | - | • - | 46,673 |
| Urban | | \$ | \$: | Barrier San | \$ - · | - |
| Water. | | : - | : - ; | | 9 | : 9 |
| Total Zone | A | :40,581 | : 6,092 | San San 🛥 et e | : 9 | 46,682 |
| | * | * | : | • | • | |
| Zone B | : 4. | : 516 | £ 58 | | : - | 574 |
| | : 6 | : 53 | 1 - : | | 1 | 53 |
| The second second | : 12 | : 38 | | | | 38 |
| Subtotal - a | ll soils | : 607 | | | | 665 |
| Urban | 11 00115 | • - | . DO | | | , 005 |
| Water | 1. · · | | | | . 37 | . 72 |
| Total Zone | | 607 | . 50 | | : 13 | 13 |
| TOTAL ZONE | | : 607 | : 58 | - | : 13 | 678 |
| CD AND COMAL D | | : | : | 1 | : | |
| GRAND TOTAL Pr | oject | :41,188 | 6,150 | - | 22 | 47,360 |
| | 3 | 1 | : | | : | |
| | | 1. | | | | |

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Basin: St. Fr Project: Big Ba State: Arkans

St. Francis River
Big Bay Ditch # 1
Arkansas

SUMMARY - TABLE II A ZONE FOR DRAINAGE CALCULATIONS ONLY COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1): | (2) | (3) | : (4) | : (5) : | (6) |
|-------|---------------------|-----------|-------------|------------|---|
| Soil: | Land use and crop : | 2/ | | Production | |
| Unit: | distribution : | Acres | : Unit | :Fer Acre: | Total |
| : | | | : - | : : | |
| A11 : | Open land : | 32,348 | : | : : | • |
| : | Crops | 29,113 | \$ ' | : : 3/ ; | |
| | Cotton ' ' ' | 10,661 | :Lbs.Lint | : 356 : | 3,795,215 |
| : | Cottonseed : | (10,661) | : Ton | : .3204 : | 3,415.70 |
| : | Corn | 1,561 | : Bu. | : .41 : | 64,732 |
| : | Rice . | 259 | : Cwt. | : 24 : | 6,216 |
| : | Soybeans | 5,982 | Bu. | : 20 : | 119,804 |
| : | Cats (Grain) | 3,256 | : Bu. | : 28 : | 90,211 |
| : | Oats (Sup.Past.) | (1,975) | :Lbs.Beef | : 65 : | 128,260 |
| : | Grain Sorghum | 699 | Bu. | 20 : | 13,744 |
| : | Perm. Pasture | 3,201 | :Lbs.Beef | | 576,180 |
| : | Idle | 3,494 | | 1. : | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |
| : | Other 1/ | 3,235 | • | | |
| 18 | Woodland | 4,669 | : Acres | | |
| : | TOTAL | 37,017 4/ | • | | |
| | • | 3.,32. | • | | |

1/ Farmsteads, farm roads, waste and non-agricultural 2/ Parenthetical amounts are duplicated acreages.

Calculated from Columns 3 and 6; rounded to nearest unit Tetal area zone A reduced by 9 Acres water and 9,656 acres already drained or not requiring drainage.

State: Project: Basin: St. Francis River
Big Bay Ditch # 1 Arkansas

SUMMARY - TABLE III A

ZONE FOR DRAINAGE CALCULATIONS ONLY

COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION, PRODUCTION COSTS AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT

(Based on projected prices)

| ĬŢ. | | | | | | | | | | | | | | | All | | Unit | Soil | (1) | |
|--|--|-------------|----------|-------|--------------|-----------------|-----------------------|------------------|----------------|--------------|----------|----------------|------------------|---------|---------------|-----------------------------|------------------------------|--|-----------------------|---|
| Farmsteads, farm roads, waste and non-agricultural | * TOTAL * | aWoodland s | other 1/ | Idle | Perm Pasture | Grain Sorghum : | : Oats (Sup.Past.): | s Oats (Grain) s | s Soybeans : t | Rice 8 | * Corn . | * Cottonseed * | : Cotton : | crops : | * Open land : | | * distribution : | * Land use and crop * | 3 (2) 3 | |
| waste and | 16,035 5/ | 892 | 1.514 | 791 | 20.5 | 734 | (314) | 992 | .3,196 | 173 | 1,193 | (5,865) | 5,865 | 13,629 | 15,143 | | Acres | 2/ | (3) | |
| non-agric | . 18 | * Acres | | | I.hs Beef | * Bu | *Lbs.Beef | * Bu. | 8. Bu. | * Cwt. | Bu. | * Ton | *Lbs.Lint | • | •• | | : Unit | • | : (4) | |
| ultural | 90 , 00 | | •• (| | 193 | 21 | 62 : | 28 | 24 8 | 25 1 | 1 41 : | 3492 : | * · · 388 · • | 3. | •• •• | • | Per Acres | Production | ; (5) ; | |
| | • | 4 | | | 139 550 | 15,201 | 19,460 | 27,286 | 76,509 | 4,325 | 48,896 | 2,048,00 | 2,275,570 | | | 1 | Total | | (6) | |
| ** * | •• • • • • • • • • • • • • • • • • • • | . 4.46 | | | 2005 | 1.53 | 2005 | •90 | 2.30 | 3.75 | 1.45 | \$ 63,00 | 25 | ÷. | | Dollars | Per Unit : Total : Per Acre: | aValue of production : Cost of production: Net | : (7) | , |
| | 1,043,275 | 3,978 | | | 26 576 | 23.257 | 3,902 | 24,557 | 175,971 | 16,218 | 70,899 | 129,025 | 568,892 | ÷. | | Dollars | Total | production | (8) | |
| | •• •• | 2.58 | oo (| 6 | 27 39 | 19.488 | 4 ,50 8 | : 18,18: | : 28.98: | 87.64 | : 34.87: | | : 103.12: | : 4/ : | | :Dollars : Dollars :Dollars | Per Acre: | *Cost of p | : (9) : | |
| | 808,995 ; 234,280 | 2,300 : | •• | | 18 759 | 14.297 | 1,413 * | 18,032 : | 92,631 | 16,162 | 41,603,8 | •• | 604,798 : 93,119 | •• | • | Dollars : | Total : Return | roduction: | : (10) : | |
| | 234,280 | 1,678 | | , , , | 7 817 | 8_960 | 2,489 | | 83,340 % | | 29,296 | | 93,119 | | | Dollars | Return | Net | (11) | |
| | | | | | | | | | | | | | | | | | | | | |

Parenthetical amounts are duplicated acreages
Calculated from Columns 3 and 6; rounded to nearest unit

Total area zone A reduced by 9 acres water, 3,777 acres woodland not anticipated to be cleared, and 26,861 Calculated from Columns 3 and 10; rounded to nearest cent acres already drained, not requiring drainage or not anticipated to be drained.

State: Project: Basin: St. Francis River Big Bay Ditch # 1 Arkansas

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT ZONE FOR DRAINAGE CALCULATIONS (Based on projected prices) SUMMARY - TABLE IV A ONL Y

| 1 1 | | | | • | | | | | | | | | | • | All: | • | Unit | Soil | (1) | |
|--|--------------------|----------|----------|------|---------------|---------------|------------------|--------------|-----------|---------|---------|------------|-----------|--------|-----------|---------------------|--------------|--|------|--|
| | TOTAL | Woodland | Other 1/ | Idle | Perm. Pasture | Grain Sorghum | Oats (Sup.Past.) | Oats (Grain) | Soybeans | Rice | Corn | Cottonseed | Cotton | Crops | Open land | | distribution | Land use and crop | (2) | |
| , | •• •• | •• | •• | •• | •• | •• | •• | ** | •• | •• | 40 | •• | •• | •• | 80 | •• | •• | •• | •• | |
| | 16,0355/ | 1 | 1,602 | 778 | 698 | 771 | (384) | 965 | 3,386 | 176 | 1,256 | (6,403) | 6,403 | 14,433 | 16,035 | | Acres | 2/ | (3) | |
| | 00 00 | •• | •• | ** | 1: | •• | ** | •• | •• | ** | •• | ** | ** | •• | •• | •• | •• | •• | •• | |
| | | Acres | : | | Lbs.Beef | Bu. | Lbs.Beef | Bu. | Bu. | Cwt. | Bu. | Ton | Lbs Lint | • 00 | | | Unit | | (4) | |
| - | •• •• | •• | •• | •• | •• | •• | •• | •• | •• | •• | •• | •• | •• | •• | •• | •• | • Pe | Pro | •• | |
| - | | • | | | 344 | 21 | 99 | 42 | 26 | 35 | 56 | 5279 | 587 | 3 | • | | Per Acre: | Production | (5) | |
| - | •• •• | •• | : | •• | ••. | •• | •• | •• | •• | •• | •• | | .3, | •• | •• | •• | | Þ | •• | |
| | | | : | | 240,400 | 16,362 | 37,850 | 40,624 | 89,141 | 6,160 | 70,623 | 3,380.16 | 3,755,740 | | | | Total | | (6) | |
| - | •9 •0 | •4 | ••. | •• | •• | •• | •• | 90 | •• | •• | •• | •• | •• | •• | •• | ָ ט | P | .V | •• | |
| - | | | :- | | 2005 | 1.53 | 2005 | 90 | 2.30 | 3.75 | 1.45 | 63,00 | 25 | | | Dollars | :Per Unit | alue of p | (7) | |
| 1 | 1 | •• | •• | •• | | •• | • | •• | D3 | •• | •• | ** | •• | •• | •• | Do | | pr oc | | |
| The second named in column 2 is not a se | 1,599,794 | | | | 48,200 | 25,034 | 7,589 | 36,561 | 205,024 | 23,099 | 102,402 | 212,950 | 938,935 | | | Dollars | Total | luction | (8) | |
| | •• •• ' | •• | •• | •• | •• | ** | ** | •• | •• | •• | •• | •• | •• | •• | •• | Do | Pe: | # Co | •• | |
| | •• •• | •• | •• | •• | 46.59: | 19.79: | 8.44 | 25.76: | 31.00: | 111,178 | 47.38: | •• | 151.36 | 4/ | | llars | :Per Acre: | st of t | (9) | |
| STATES OF THE PERSON NAMED IN COLUMN STATES OF T | 1,229,074: 370,720 | •• | •• | •• | 32,520: | 15,260: | 3,241: | 24,861: | 104,981; | 19,565; | 59,509: | •• | 969,137: | •• | •• | :Dollars :Dollars : | Total: | :Value of production : Cost of production: Net | (10) | |
| - | 370,720 | | | | 15,680 | 9,774 | 4,348 | | 100,043 9 | | 42,893 | | 182,748 | | | Dollars | Return | Net | (11) | |
| | | | | | | | | - | ພປ. | | | | | | | | | | | |

Farmsteads, farm roads, waste and non-agricultural

Parenthetical amounts are duplicated acreages.

Calculated from Columns 3 and 6; rounded to nearest unit Cal culated from Columns 3 and 10; rounded to nearest cent

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Total area zone A reduced by 9 acres water, 3,777 acres woodland not anticipated to be cleared, and 26,861

acres already drained, not requiring drainage or not anticipated to be drained.

Basin: St.
Project: Big
State: Ark

St. Francis River Big Bay Ditch #1 Arkansas

TABLE II.B. 1/

ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS

COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1) | : (2) | : (3) | : (4) : | (5) | (6) |
|------|-------------------|---------|------------|-----------|--------|
| Soil | Land use and crop | : 3/ | : F | roduction | |
| Unit | distribution | : Acres | : Unit : | Per Acres | Total |
| | | : | | · · · · | |
| 4. | : Open land | \$ 607 | : : | | |
| | : Crops | \$ 546 | : | | |
| | : Cotton | : 240 | :Lbs.Lint: | 405 | 97,200 |
| | : Cottonseed | : (240) | : Ton : | •3645 | 87.48 |
| | corn | : 38 | : Bu. : | 43 | 1,634 |
| | Soybeans | : 115 | Bu. | 25 | 2,875 |
| | : Oats (Grain) | \$.55. | . Bu. : | 33 | 1.815 |
| | Grain Sorghum | 1 22 | : Buc : | 20 | 440 |
| | Perm. Pasture | a 33" | :Lbs.Beef: | | 5,940 |
| | : Idle | 43 | | | |
| - | t Other 2/ | : 61 " | | | |
| | Woodland | : 58 | : Acres : | | : • |
| 111 | TOTAL | 665 A | 70 | | |
| | | 4 | | | |
| | | • | | | |

1/ One soil only; no summary required
2/ Farmsteads, farm roads, waste and non-agricultural
3/ Parenthetical amounts are duplicated acreages.
4/ Total area zone B reduced by 13 acres water

States Project: Basin Arkan sas Big Bay Ditch # 1 St. Francis River

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS

(Based on projected prices)

| 1/ | | | | | | | | | | | | | 42 | | Unit | Soil | (I) | |
|----------------------|------|----------------|-------|-----------|------|-----------------|--------------|---------------|----------|-----------------|-----------------|-------|-----------|-------------------|--------------|-------------------------|---------|--------------|
| One soil only no si | | * TOTAL | | other 2/ | Idle | Grain Sorghum : | Oats (Grain) | Soybeans | Corn | Cottonseed | Cotton | Crops | Open land | 1903 | distribution | Land use and crop | (2) | |
| no summery required. | • | 63 | 1 | 64 | يسر: | يد. | 23 | 14 | · Čīj | (31 | 315 | 577 | 636 | | Acres | 3 | (3) | |
| אונות | L | 6365/ \$ | •• | 60 H-2 | 7 . | 7 . | | 3 | 7 * | _ | | •• | •• | •• | | 27 | • | |
| . Da | · | | Acres | ٠. | •• | Bu | Bu. | Bu. | Bu. | Ton | Lbs Lint | | | | Unit | ** | (4) | |
| | | •• | •• | •• | | 25 | : 40 | 29: | 50. | 1.4320 | \$ 480: | 1. 4/ | •• | •• | :Per Acre: | Production. | : (5) | 34) |
| | | | | | | 425 | 920 | 4,147 | 2,850 | 136-08 | 151,200 | | | | Total | بر | (6) | Cond in none |
| | •• - | •• | | • | •• | 1.53 | 90 | 2.30 | : 1,45 | \$ 63,00 | . 25 | .** | •• | :Dollars | Per Unit | *Value of | : (7) | TOOR TOOR |
| | •• | : 61,521 | •• | •• | | : 650 | . 828 | 9 ,538 | a. 4,132 | : 8,573 | : 37,800 | *** | , | :Dollars | : Total | production | : (8) | 100) |
| | •• | ! | ••, | •• | | * 22°13 | : 24.28 | \$ 33,06 | : 42.35 | ,** | : 125.12 | | •• | :Dollars :Dollars | :Per Acres | :Cost of | : (9) | |
| | | 47,489 :14,032 | | 1 | •• | 376 | . 558 | 4,728 | 2,414 | •• | 125.12 : 39,413 | •• | | | * Total | :Cost of production:Net | : (10): | |
| | • | 14.032 | | | •• | 274 | | | 1,718: | •• | : 6,960 | •• | • | Dollars | Return | Net : | (11) | |
| | .; | | | : | | | - | 29 | 3→ | | | | | | 1 | | 1 | |

one soil only; no summary required.....

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Parenthetical amounts are duplicated acreages Farmsteads, farm roads, waste and non-agricultural

³⁰c03 percent cropland drained

Total area zone B reduced by 13 acres water and 29 acres woodland not anticipated to be cleared.

Basin: St. Francis River
Project: Big Bay Ditch # 1
State: Arkansas

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS (Based on projected prices)

| 7 | | | | | | | | | | | | | ₽ | | Unit | Soil | (1) | |
|------------------------------------|-------------|----------------|------------|----------|------|---------------|--------------|----------|-------------|--------------|-----------------|-------|-------------|-------------------|--------------|--|------|--|
| CD | 90 | 66 | W. | 90 | 46 | 49 | 49 | 44 | ••, | 46 | 96 | ** | •• | 96 | 40 | ę • | •• | |
| One soil only; no summary required | | TOTAL | Woodland - | Other 2/ | Idle | Grain Sorghum | Oats (Grain) | Soybeans | Corn | Cottonseed | Cotton | Crops | Open land | | distribution | Land use and crop | (2) | |
| Burun | 9,0, | •• | •• | 40 | 44 | 9,5 | •• | #¢ | ** | 4si | •• | 99 | ** | 49 | 99 | ••• | •• | |
| ry requir | Lo | 6365/ | 1 | .64 | 17 | .17 | 23 | 143 | 57 | (315) | 315 | 572 | 636 | ÷ | Acres | 3 | (3) | |
| ed | 90 . | 99 | 0.0 | ••; | 60 | •• | 44 | 48 | 44 | •• | 178 | 0.0 | - | 44 | 99 | 44 | •• | |
| | | | Acres | | | Bu. | Bu. | Bu. | Bu, | Ton | Lbs.Lint | | | | Unit | | (4) | |
| | •• | 6 0 | •,•, | ••, | ••, | •.0 | 98 | 4.4. | •# | •• • 4 | 49 | •• | •4 | •• | ₽Pe | Pro | •• | |
| : | | | • | | | 25 | 4.8 | 29 | 58 | 4905 | 545 | 4/ | | | Per Acres | Production | (5) | |
| | | • | ••, | | ٠,, | •5. | ••• | ** | | 44. | ··· | | | | | 446 | : | |
| | | | | | | 425 | 1,104 | 4,147 | 3,306 | 154,51 | 171,675 | | | | Total | | (6) | |
| | •• | •• | ••, | ••. | ••, | ep. | 0,0 | 94, | 0 p. | 0 \$1 | 44 | 80, | O p. | D. | # Pe | OV: | *40 | |
| | ••- | | ••. | | •• | 1.53 * | • 90 • | 2.30 : | 1.45 : | 63:00 \$ | 25 | •• | ** | Dollars : | Per Unit : | Value of production *Cost of production: | (7) | |
| : | | 6 | | : | | | | | | | 4 | | | Do | 1-1 | rod | | |
| | | 68,629 | | | | 650 | 994 | 9,538 | 4,794 | 9,734 | 42,919 | | | * Dollars | Total | uction | (8) | |
| | •• | •• ' | •• | •• | •• | ••, | **. | 69. | 98 | ** | 99. | •• | •• | DC: | *Pe | # C c | .00 | |
| | • | : .· | | • | | 22,13 | 29.25 | 33.06 | 48,43 | 7 | 143,05 : 45,061 | | | Dollars : Dollars | Per Acres | st of | (6) | |
| | •• | 5 | ••. | **. | ••. | •>. | •• | ** | •,•, | •• | *· 4 | ••. | •• | Do | | pro | •• | |
| | - | 53,599 :15,030 | | : | | 376 | 673 | 4,728 | 2,761 | | 5,061 | | | llars | Total | duc ti on | (01) | |
| | •• | : 15 | ** | ••. | •4 | ••, | ••. | •• | es. | ••, | * 7 | ••. | ** | : Do | | | *** | |
| | | 030 | - | : | | 274 | 321 | 4,810 | 2,033 | | 7,592 | | | Dollars | Return | Net | (11) | |
| | | | | | | | | -21 | 94. | - | | | | | | | 110 | |

82.55 percent cropland drained ... Total area zone B reduced by 13 acres water and 29 acres woodland not anticipated to be cleared.

Farmsteads, farm roads, waste and non-agricultural Parenthetical amounts are duplicated acreages.

Basin: St. Francis River
Project: Big Bay Ditch # 1
State: Arkansas

TABLE V
PROJECT AREA SUMMARY BY SOIL MAPPING UNITS

| ************************************** | | | | |
|--|---|---|--------------|-----------------|
| (1) : (2) | : (3) : (4) : (5) | : (6) : (7) : | (8) | (9) |
| | Future Without Project | Future With Project | | |
| Unit Acres | Gross & Cost : Net | : (Froduction in Politars) | Net :Ne | :Net Production |
| • | ENOZ | A (not subject to flooding) | •• | |
| 4 8 8,014 | : 684,545 : 522,971 : 161,574 | 977,928 : 754,032 : | 223,896 : | 62,322 |
| 6 8 1,705 | •• | : 173,065 : 137,785 : | 35,280 : | 27,303 |
| 7 : 1,564 | : 76,962 : | 50 | 38,390 : | 8,242 |
| 9 574 | \$ 24,570 : | 43,562 33,500 1 | 10,062 : | |
| 10: 8 4,178 | 159,088 : 131,340 : 27,748 ·· | •• | 63,092 : | 35,344 |
| ••• | | •• | | |
| confor a rayonda | ZONE 2000 2000 2000 2000 1 1/1 | B = (subject to flooding) | 0.70,780 4 | 100,100 |
| 4 s 636 | 8 61,521 8 47,489 8 14,032 | | 15,030 : | 998 |
| Subtotal: 636. | 2/2 61,521 447,489 14,032 | 68,629 : 53,599 : | 15,030 : | 998 |
| TOTAL : 16,671 | : 1,104,796 : 856,484 : 248,312 | 1,668,423 : 1,282,673 : | 385,750 : | 137,438 |
| 1/ Total area zone A | Total area zone A reduced by 9 acres water, 3,777 acres woodland not anticipated to be cleared, and | oodland not anticipated to be | cleared, and | |
| 2/ Total area zone B | Total area zone B reduced by 13 acres water and 29 acres woodland | woodland not anticipated to be cleared. | cleared | |

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Basin: Project: State:

St. Francis River
Big Bay Ditch # 1
Arkansas

TABLE VI LAND CONVERSIONS WITH PROJECT

| (1) | (2) | (3) | : (4) | : (5) |
|---------------------------|--------------------|-------------|------------|------------|
| | | Cost | : Cost | . . |
| Type of | Total : | of | : of | : Total |
| Conversion 1/ | Amount : | Clearing | :Smoothing | : Cost |
| | Acres | | : Dollars | : Dollars |
| Per Acre | 1101 00 | DOLLAID | POTICE O | Dollar |
| W to GC | | 60 | 10 | · |
| • | XX 1 | | • | |
| W to IC | XX : | 60 | 10 | : XX |
| W to P | ** *** *** *** *** | 60 | * XX | * XX |
| P to GC | XX S | " xx | • • | : XX |
| P to IC | XX : | XX | : | : XX |
| GC to IC | xx, s | xx | : XX | : XX |
| GC to P | XX : | XX | : XX | * XX |
| | | | : | : |
| | | | : | : |
| Project | | | 1 | ! |
| W to GC | 876 | 52,560 | : 8,760 | : 61,320 |
| W to IC | 3 | 180 | 30 | : 210 |
| W to P | 13 | 780 | | : 780 |
| | 10 | | t xx | * 700 |
| | - | XX. | • | : - |
| P to IC | - | xx | - | : - |
| GC to IC | | XX | \$ XX | : - |
| GC to P | • • | XX | * xx | : - |
| | | | \$ | : |
| | | | : | : |
| Total project | xx : | 53,520 | : 8,790 | : 62,310 |
| | | | | : |
| Annual amortized value 2/ | , xx | xx | * XX | 3,413 |
| 2/ | | | • | • |
| Total annual cost of | | • | | • |
| conversions | | | | . 7 477 |
| COULAGE STORS | xx : | xx | : XX | : 3,413 |
| W woodlands CO | | | 1 | : |

^{1/} W- woodland; GC - general dry-farmed crops; IC - irrigated crops: (rica): P - resture

crops; (rice); P - pasture.

2/ Amortized over 50 years at 5 percent

| State: | Project: | Basin: | |
|----------|-----------------|-----------------|--|
| Arkansas | Big Bay Ditch # | St. Francis Riv | |

ANALYSIS OF FARM DRAINAGE SYSTEM COSTS

| | | ᅜ | | | | | | А | Zone | (1) | |
|-----------|----------------------|---|--|--|--|------------------------------------|---------------------|--|--|--|--|
| * TOTAL | *Subtotal | * 4 - General crops | *Subtotal | #10 - General crops #10 - Rice #10 - Pasture | 9 - General crops 9 - Rice 9 - Pasture | * 7 - General crops * 7 - Pasture | * 6 - General crops | 4 4 - General crops | Soil mapping unit | (2) | |
| 14,733 1/ | 300 1/ | 300 | 14,433 1/ | 3,046 150 | 413 26 78 | 1,352 56 | 1,535 | 7,218 | Area | (3) | |
| 201,187 | 3,990 | 3,990 | 197,197 | 40,509 1,246 4,685 | 5,492 8225 | 26,048 860 | 21,571 | 95,926 | 12/ | (4) | |
| 19,382 | 384 | 384 | 18,998 | 3,903 120 451 | 529 22 61 | 2,509 83 | 2,078 | 9,242 | Equivalent Instl. Cost 3/ | Annua 1 | |
| 23,446 | 460 | 460 | 22,986 | 4,674 48 180 | 634 | 3,006 | 3,319 | Dollars 11,068 | nance | (6) | |
| 42,828 | 844 | 844 | 41,984 | 8,577 168 631 | 1,163 31 76 | 5,515 | 5,397 | Dollars 20,310 | Annual Cost | Total | |
| | * 14,733 1/: 201,187 | 300 1/s 3,990 : 384 : 460 : 14,733 1/s 201,187 : 19,382 : 23,446 : 42, | 34 - General crops : 300 : 3,990 : 384 : 460 : 300 L/: 3,990 : 384 : 460 : 384 | ### Subtotal | #10 - General crops | # 9 - General crops | # 7 - General crops | # 6 - General crops : 1,535 : 21,571 : 2,078 : 3,319 : 3,57 - General crops : 1,352 : 26,048 : 2,509 : 3,006 : 7 - Pasture : 56 : 860 : 83 : 33 : 34 : 9 - General crops : 413 : 5,492 : 529 : 634 : 9 - Rice : 26 : 26 : 225 : 225 : 22 : 9 : 634 : 10 - Pasture : 3,046 : 40,509 : 3,903 : 4,674 : 10 - Pasture : 1564 : 4,685 : 120 : 120 : 14,433 1/*: 197,197 : 18,998 : 22,986 : 4 - General crops : 300 : 3,990 : 384 : 460 : | ## 4 - General crops : Acres Dollars Dollars Dollars | Soil mapping unit Area :Cost :Equivalent :Annu :An | (2) (3) (4) (5) (6) (6) (7) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1 |

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Basin:
Project:
State:

St. Francis River
Big Bay Ditch # 1
Arkansas

TABLE VIII
ANALYSIS OF GROUP DRAINAGE NEEDS AND COSTS

| | 1.1 | | | |
|--|---------------------|---|----------|-----------------------------------|
| Item | : Unit : | | Unit : | Total Cost |
| 1 cent | * 0117.0 | | Dollars: | The second second |
| Excavation 1/ | | • | | |
| Spreading spoil 1/ | : | · . | : ** | |
| Clearing right-of-way 1/ | :Cubic Yard: | 134,800 | : 0.20 ; | 26,960 |
| | | 78 | 30.00 | 2,340 |
| Right+of-way easements | : Acres : | 10 | . 20.00 | 2,040 |
| Crossings | Each . | 15 | 300.00 | 4,500 |
| | 1 | | : | |
| Swinging water gaps | t "Each : | 10 | 40.00 : | 400 |
| Pipe drop structures | Each : | 10 | 200.00 | 2,000 |
| The mob someonies | Page 3 | 10 | 200,000 | 2,000 |
| Flap gates | : Each | 6 | 100.00 | 600 |
| | : | | : " " : | |
| Vegetative plantings | : Acres : | 16 | 8.00 : | 128 |
| | | | | 41 |
| Total construction cost | : xx : | xx | xx : | 36,928 |
| | * | . 4 | ; , | |
| | | | | |
| Engineering cost | : XX : | XX | : XX : | 3,693 |
| | : " | S and | : | |
| Contingencies and legal | xx : | XX XX | XX : | |
| Contingencies and legal | : " | S and | : | 3,693 |
| | : " | S and | : | |
| Contingencies and legal | xx | 5 % xx | xx : | 3,693 |
| ontingencies and legal Total installation cost | xx : | S and | xx : | 44,314 |
| Contingencies and legal Cotal installation cost Annual equivalent - installation (amortized for 30 years at 3 | xx : | 5 % xx | xx : | 3,693 |
| Contingencies and legal Cotal installation cost Annual equivalent - installation (amortized for 30 years at 3 | xx : | 5 % xx | xx : | 44,314 |
| ontingencies and legal fotal installation cost Annual equivalent - installation (amortized for 30 years at 32 Annual maintenance cost | xx n cost. percent) | XX | xx : | 3,693 44,314 2,409 1,846 |
| Contingencies and legal Total installation cost | xx n cost. percent) | XX | xx : | 3,693 44,314 2,409 |
| ontingencies and legal otal installation cost innual equivalent - installation (amortized for 30 years at 32 innual maintenance cost | cost percent) | XX | xx : | 3,693 44,314 2,409 1,846 |

^{1/} These items included in excavation costs under normal contract procedures.

2/ Annual loss of production - right-of-way. .. 24 acres @ \$14.89 per acre.

Basin: Project: State: Big Bay Ditch # 1
Arkansas

TABLE IX SUMMARY OF ANNUAL NET PRODUCTION RETURNS AND ASSOCIATED COSTS

| (1) | : (2) | : (3) |
|-------------------------------|---------|---------------------|
| | 1 | Discounted |
| Item | : Total | : Amount |
| | Dollars | : Dollars |
| 1. Net return with project | 385,750 | t XX |
| 2. Net return without project | 248,312 | t XX |
| 3. Gross benefit to project | 137,438 | : 85,379 <u>2</u> / |
| 4. Farm drainage cost | : xx | : xx 2/ |
| a. Installation cost | 19,382 | xx |
| b. Maintenance cost | 23,446 | t XX |
| c. Total | 42,828 | : 26,606 |
| | , | 1 |
| 5. Group drainage cost | xx x | s xx 3/ |
| a. Installation cost | 2,409 | : XX |
| b. Maintenance cost 1/ | 2,203 | * xx |
| c. Total | 4,612 | : 3,830 |
| | | : |
| 6. Conversion cost | xx ** | * xx 2/ |
| a. Installation cost | 3,413 | * XX |
| b. Maintenance cost | • | * XX |
| c. Total | 3,413 | : 2,120 |
| 2 | | : |

Includes loss of production, right-of-way

Discounted at 5 percent to account for estimated 20 year lag
to full installation, maintenance, and benefit accrual.

Discounted at 3 ½ percent to account for estimated 10 year lag

to full installation, maintenance, and benefit accrual.

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Basin: St. Francis River
Project: Eight Mile Creek Ditch
Reach: 1
State: Arkansas

TABLE I PRESENT LAND USE

| Zone | :Soil map-: | Open : (Acres): | Wooded : (Acres): | Irban (Acres) | | Total (Acres) |
|---------------------------------|-----------------------|--|------------------------------|------------------|------------|-------------------------------------|
| Zone A | 7 | 2,291: 4,651: | 342: 718: | | | 2,633 |
| | : 10 : 11 : 15s | 427: 3,967: 1,197: 1,881: | 171: 718: 171: 325: | | | 598 4,685 1,368 2,206 |
| Subtotal - al Urban Water | ll soils | <u>بلاباربلا</u> | 2,445 | 205 | - | 16,859 |
| Total - Zone | A | 14,414: | 2 بلبار 2 | 205 | я ₩ | 17,064 |
| Zone B | 6 7 10 | 1,187: 109: 1,523: 164: 141: | 135: 55: 147: 117: | | -: | 1,322 164 1,670 281 141 |
| Subtotal - al Urban | ll soils | 3,124: | 454: | | - | 3,578 |
| Water Total - Zone | В | 3,124 | 454 | | 96: 96: | 96 3,674 |
| GRAND TOTAL - Read | ch 1 | 17,538: | 2,899: | 205 | 96 | 20,738 |

Basin: St. Francis River
Project: Eight Mile Creek Ditch
Reach: 1
State: Arkansas

SUMMARY - TABLE II A ZONE FOR DRAINAGE CALCULATIONS ONLY COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1) Soil | : (2) : Land use and crop | : (3) | : (4) : : Prod | (5) duction | (6) |
|-------------|------------------------------|--|---|-------------------------------------|--|
| Unit | : distribution | : Acres | : Unit : | Per Acre | Total |
| All | : Other 1/ : Woodland | : (1,950) : 976 : 215 : 336 : 1,845 : (880) | Lbs.Lint Ton Bu. Cwt. Bu. Bu. Lbs.Beef Lbs.Beef | .3162 41 26 20 26 63 | 685,050 616,54 39,772 5,652 6,804 47,309 55,150 428,940 |

^{1/} Farmsteads, farm roads, waste and non-agricultural
2/ Parenthetical amounts are duplicated acreages
3/ Calculated from Columns 3 and 6; rounded to nearest unit
1/ Total area Zone A reduced by 205 acres urban and 3,874 acres already drained or not requiring drainage.

Basin: St. Francis River
Project: Eight Wile Creek Ditch
Reach: 1
State: Arkansas

SUMMARY - TABLE III A ZONE FOR DRAINAGE CALCULATIONS ONLY

COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION, PRODUCTION COSTS AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT

(Based on projected prices)

| - | | | | | | | | | | | | | | | AT: | | Unit | Soil | (E) | |
|---|------------------|-----------|-----------|------|---------------|---------------|------------------|----------------|----------|-----------|-----------|------------|-------------|---------|----------------|----------|------------------|--------------------------|---------|--|
| | TOTAL | Woodland | : Other 1 | Idle | Perm. Pasture | Grain Sorghum | Oats (Sup.Past.) | : Oats (Grain) | Soybeans | Rice | Corn | Cottonseed | Cotton | Crops | Open land | | distribution | : Land use and crop | (2) | |
| | : 5,735 5/ | : 709 | 502 | 254 | : 297 | . 78 | : (297) | : 686 | 856 | . 156 | : 680 | : (1,517) | : 1,517 | : 4,524 | : 5,026 | •• | : Acres | 2/ | : (3) | |
| | •• | : Acres : | •• | •• | :Lbs.Beef : | · Bu. | :Lbs.Beef : | : Bu. : | : Bu. : | : Cwt. : | : Bu. : | : Ton : | :Lbs.Lint : | •• | •• | •• | : Unit : | Pro | : (4) : | |
| | • | •• | 40 | | 193: | . 61 | 58 | 27 : | 26 : | 25 | £3 | ·3460 : | 384 | | | | :Per Acre : | Production | (5) | |
| | : | . , | | : | 57,185 | 1,482 | 17,295 | 18,435 | 22,484 : | 3,900 | 29,088 | 524.93 | 583,255 | | 2. | : | Total | * | (6) | |
| | | 9.54 . | • | 1 . | 2005 | 1.53 | 2005 | • 90 : | 2.30 | 3.75 | 1.45 : | 63.00 | •25 | •• | | Dollars | Per Unit : | Value of production | (7): | |
| | 327,957 | 6,764 | | | 39466 | 2,267 | 3,467 | 16,592 | 51,713 | щ,625 | 42,178 | 33,071 | 145,814 | | | Dollars | Total | roduction | (8) | |
| | •• | : 5.51 : | •• | | : 27.29: | : 18.42 : | : 4.10: | : 17.87: | 30.85 | : 87.64 : | : 36.03 : | •• | : 101.97 : | . A | •• | Dollars: | :Per Acre: Total | :Cost of production: Net | : (9) : | |
| | 246,190 : 81,767 | 3,907 | | | 40T 68 | 1,437 | 1,218 | 12,262 | 26,407 | 13,672 | 24,498 | | 154,685 | | | Dollars | | roduction | (TO) | |
| | 81,767 | 2,857 | •• | •• | 3,362 | 830 | : 2,249 | : 4,330 | 25,306° | · 9538 | : 17,680 | •• | : 24,200 | •• | •• | :Dollars | Return | Net | (11) | |

Farmsteads, farm roads, waste and non-agricultural

Parenthetical amounts are duplicated acreages

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent

Total area Zone A reduced by 205 acres urban, 1,240 acres woodland not anticipated to be cleared, and 9,884 acres already drained, not requiring drainage or not anticipated to be drained.

Basin: St. Francis River Reach: Project: Arkansas Hight Mile Creek Ditch

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT ZONE FOR DRAINAGE CALCULATIONS ONLY (Based on projected prices) SUMMARY - TABLE IV A

| 1/ Farmsteads farm roads waste and non-agricultural | ; TOTAL | : Woodland | : Other 1 | : Idle | : Perm. Pasture | : Grain Sorghum | : Oats (Sup. Past.) | : Oats (Grain) | : Soybeans | : Rice | : Corn | : Cottonseed | : Cotton | : Crops | All : Open land | •• | Unit : distribution | •• | •• | |
|---|-------------------|------------|-----------|---------|-----------------|-----------------|---------------------|----------------|------------|-----------|-----------|--------------|------------|--------------|-----------------|------------|---------------------|--------------------------|---------|--|
| na bac and no | 5,735 <u>5</u> /: | | : 573 : | : 291 : | | 89 | | | : 974 : | : 179 : | : 773 : | : (1,730) : | •• | •• | : 5,735 | •• | Acres | 2/: | : (3); | |
| משפתה כוו | | Acres | | | Lbs.Beef | Bu. | :Lbs. Beef | Bu. | Bu. | Cwt. | Bu. | Ton | Lbs.Lint | | | .÷ | Unit | | (4) | |
| רבייוול | •• •• | | | •• | 352 | : 19 : | 100 : | •• | 27 | :: ;; | 57 : | : . 4801 · : | 533 | : <u>w</u> : | •• | •• | :Per Acre : | Production | : (5) : | |
| | , | | : | | 119,955 | 1,691 | 32,820 | 32,750 | 26,635 | 6,265 | 540 644 | 830.63 | 922,910 | | | | 'rotal | | (6) | |
| | | | : | •• | 2005 | · 1.53 · | 2005 | 90 : | : 2.30 : | : 3.75 : | : 1.45 : | : 63,00 : | 25 | •• | •• | Dollars : | Per Unit : | :Value of production | : (7) : | |
| | 494,370 | | | , | 24,051 | 2,587 | 6,580 | 29,475 | 61,261 | 23,494 | 63,865 | 52,330 | 230,727 | | | Dollars | Total | | (8) | |
| | | •• | •• | •• | : 47.49 : | : 18.42 : | : 8,60 : | : 25.56 : | : 31.82 : | : 71,17 : | : 47.63 : | •• | : 139,35 : | : F | •• | : Dollars: | Per Acre: Total | :Cost of production: Net | : (9) | |
| | 369,523 :124,847 | | | | 16,194 | 1,639 | 2,821 | 20,068 | 30,997 | 19,899 | 36,821 | | 241,084 | | | Dollars | Total | roduction | (OT) | |
| | :124,847 | | •• | •• | · 7,857 | •• | 3,759 | •• | •• | •• | : 27,044 | | : 41,973 | •• | •• | Dollars | Return | : Net | : (王) | |

2/ Parenthetical amounts are duplicated acreages
3/ Calculated from Columns 3 and 6; rounded to nearest unit
4/ Calculated from Columns 3 and 10; rounded to nearest cent
5/ Total area Zone A reduced by 205 acres urban, 1,240 acres Calculated from Columns 3 and 10; rounded to nearest cent

Total area Zone A reduced by 205 acres urban, 1,240 acres woodland not anticipated to be cleared, and 9,884 acres already drained, not requiring drainage, or not anticipated to be drained.

Basin: St. Francis River
Project: Eight Mile Creek Ditch
Reach: 1
State: Arkansas

SUMMARY - TABLE II B

ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS

COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1) soil | (2) Land use and crop | (3) 2/ | station to be seen and the second | : (5) : oduction | (6) |
|----------|---|---|--|--|---|
| Unit | distribution : | Acres | : Unit | :Per Acre: | Total |
| All | Open land Crops Cotton Cottonseed Corn Soybeans Oats (Grain) Oats (Sup. Past.) Grain Sorghum Perm. Pasture Idle Other 1/ Woodland TOTAL | (675) 378 248 456 (115) 39 | Lbs.Lint Ton Bu. Bu. Lbs.Beef Bu. Lbs.Beef | •3875 •45 •26 •35 •85 •21 | 290,625 261.56 16,965 6,423 16,163 9,775 819 110,755 |

^{1/} Farmsteads, farm roads, waste and non-agricultural

2/ Parenthetical amounts are duplicated acreages

/ Total area Zone B reduced by 96 acres water.

^{3/} Calculated from Columns 3 and 6; rounded to nearest unit

Basin: St. Francis River
Project: Eight Mile Creek Ditch
Reach: 1
State: Arkansas

COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION PROJECT FUTURE CONDITIONS WITHOUT PROJECT ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS (Based on projected prices) SUMMARY - TABLE III B

| 1/ | , | •• •• | . 40 | •• | •• | •• | •• | ** | •• | •• | •• | •• | All : | | Unit: | Soil: | (L): | |
|--|-----------------|----------|--------|---------------|---------------|-------------------|--------------|-----------|-----------|------------|-----------------|-------|-----------|-----------|--------------|--------------------------|---------|---|
| 1/ Franctoods form mode | TOTAL | Woodland | Idle , | Perm. Pasture | Grain Sorghum | Oats (Sup. Past.) | Oats (Grain) | Soybeans | Corn | Cottonseed | Cotton | Crops | Open land | | distribution | Land use and crop | (2) | |
| | 3,448 5/ | 195 | 241 | 12 | 70 | · (42) | 293 | 655 | 436 | (1,191) | 1,191 | 2,928 | 3,253 | | Acres | 2/ | (3) | |
| ייייי לייייייייייייייייייייייייייייייי | | Acres | •• | :Lbs.Beef | : Bu. | :Lbs.Beef | : Bu'e | · Bu• | : Bu. | : Ton | :Lbs.Lint | ••. | ••. | •• | : Unit | ·· | : (4) | and the same of the same of the same of |
| T+ | •• | •• •• | •• | 295 | 25 | : 1:00 | L3 | 29 | 52 | 51540: | 502 | W | •• | •• | Per Acre | Production | : (5) | |
| | · · | •• | •• | : 12,390 | 1,750 | : 4,200 | : 12,485 | : 19,020 | 22,515 | : 537.72 | : 597,475 | •• | ** | •• | : Total | | : (6) | |
| | ••• | : 9,54 | •• | . 2005 | · 1.53 | 2005 | 90 | 2,30 | · 1.45 | : 63.00 | | | •• | Dollars | :Per Unit | :Value of I | : (7) | |
| | 278,738 | 1,861 | •• | 2,484 | 2,677 | 842 | 11,236 | 43,746 | 32,646 | 33,877 | : 149,369 | | •• | Dollars | Total | production | (8) | |
| | | 5,51: | •• | : 55.04 | : 22.13 : | 8,60 : | 25.89 : | : 33.10 : | : 43.80 : | ••. | : 131.79 : | · // | •• | Dollars: | Per Acre: | :Cost of production: Net | : (9) : | |
| | 210,006: 68,732 | 1,075 | ••. | 1,703: | 1,549: | | ••• | 21,679: | | ••. | 156,959: 26,287 | | •• | Dollars : | Total : | roduction: | (10): | |
| | 68,732 | 786 | | 781 | 1,128 | 181 | 3,651 | 22,067 ; | 13,551 | | 26,287 | • | | Dollars | Return | Net | (11) | |

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られをでけ Farmsteads, farm roads, waste and non-agricultural Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent Parenthetical amounts are duplicated acreages Total area Zone B reduced by 96 acres water and 130 acres woodland not anticipated to be cleared.

Basin: St. Francis River Project: Eight Mile Creek Ditch State: Reach: Arkansas

PRODUCTION COSTS AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION (Based on projected prices) SUMMARY - TABLE IV B

| •• •• | ** | ** | •• | •• | ** | •• | •• | •• | •• | •• | *** | •• | All: | | Unit: | Soil: | (<u>T</u>): |
|------------------|----------|----------------------|--------|----------------|-----------------|---------------------|--------------|----------|--------|------------|-----------|---------|-----------|------------|------------------|----------------------|---------------|
| TOTAL | Woodland | Other 1 | Idle : | Perm Pasture : | Grain Sorghum : | Oats (Sup. Past.) : | Oats (Grain) | Soybeans | Corn | Cottonseed | Cotton | Crops : | Open land | | distribution . | Land use and crop : | (2) |
| 3,446 5/ | 8 | 7. 2. 2. 3. | 109 | 1 | 76 | (†††) | 310 | 169 | 532 | (1,338) | 1,338 | 3,103 | 3,4448 | | Acres | 2/ | (3) |
| •••• | Acres | •• | •• | :Lbs.Beef | Bu. | :Lbs.Beef | : Bu. | · Bu. | · Bu. | : Ton | :Lbs.Lint | •• | •• | •• | : Unit | | (4) |
| | | | | : :360 :: | . 25 | : 130 : | : 147 | . 29 | | : 4947 : | 550 | ··· | | •• | Unit :Per Acre | Production | (5) |
| | | | | 048,51 | 1,900 | 5,720 | 645°41 | 20,151 | 29,653 | 661,93 | 735,480 | | | | Total | | (6) |
| | •• | •• | , | 2005 | 1.53 | 2005 | | 2.30: | 1.45 | : 63,00 | . 25 | •• | | Dollars | :Per Unit | :Value of production | : (7) |
| 335,238 | | | | 3,176 | 2,907 | 1,147 | 13,093 | 46,347 | 42,996 | 41,702 | 183,870 | | | Dollars | Total | | (8) |
| •• •• | | •• | | : 48.50: | : 22°13: | 11.83: | 28.58: | 33.10: | 16.85 | •• | : 143.95: | . /J. | •• | : Dollars: | :Per Acre: Total | :Cost of production: | : (9) : |
| 253,694 : 81,544 | | •• | | 2,134: | 1,682 : | 521 : | 8,861 | 22,968 | 24,923 | ., | 192,605: | • | | Dollars: | | roduction: | (0T) |
| 81,544 | | *: | | 1,042 | 1,225 | 626 | 4,232 | 23,379 | 18,073 | | 32,967 | | | Dollars | Return | Net | (11) |

Parenthetical amounts are duplicated acreages Farmsteads, farm roads, waste and non-agricultural

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent

Total area Zone B reduced by 96 acres water and 130 acres woodland not anticipated to be cleared.

Basin: St. Francis River
Project: Eight Mile Creek Ditch
Reach: 1
State: Arkansas

REACH SUMMARY BY SOIL MAPPING UNITS

| TOTAL: | Subtotal | ₽ ₇ ₽ | | Subtotal | 77 + | •• | Soil: | (I) |
|-----------|-----------|------------------------------|-----------------|-----------|-------------------------------|---------------------------|-------------------------|---------|
| 9,183 | 3,4448 2/ | 1,681 1,626 141 | | 5,735 Y | 1,063 2,685 1,987 | | Acres | (2) |
| 606,695 | 278,738 | 142,561 121,438 14,739 | | 327,957 | 84,126 174,115 69,716 | • | (Productions: | (3) |
| 456,196 | 210,006 | 110,969 87,284 11,753 | | 246,190 | 64,660 123,828 57,702 | | (Production in Dollars) | : (4) : |
| 150,499 | 68,732 | 31,592 34,154 2,986 | ZONE B - | 81,767 | 19,466 50,287 12,014 | ZONE A - | Net | (5) |
| 829,608 | 335,238 | 175,661 144,838 14,739 | (subject to flo | 494,370 | 122,414 249,393 122,563 | (not subject to flooding) | (Productions) | (6) |
| 623,217 | 253,694 | 137,056 | to flooding) | 369,523 | 95,477 181,020 93,026 | to flooding) | (Production in Dollars) | (7) |
| : 206,391 | \$1,5W | 38,605 | • | : 124,847 | 26,937 68,373 29,537 | | Net | : (8) |
| 55,892 | 12,812 | 7,013 5,799 | | 43,080 | 7,471 18,086 17,523 | | : Production | (9) |
| | | | - 3 | 07 - | | | | |

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1/ Total area Zone A reduced by 205 acres urban, 1,240 acres woodland not anticipated to be cleared, and 9,884 acres already drained, not requiring drainage or not anticipated to be drained.
2/ Total area Zone B reduced by 96 acres water and 130 acres woodland not anticipated to be cleared.

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Basin: Si. Francis River
Project: Eight Mile Creek Ditch
Reach: 1
State: Arkansas

TABLE VI LAND CONVERSIONS WITH PROJECT

| (1) | : (2) | : (3) | : (4) | (5) |
|---------------------------|----------|-----------|------------|-----------|
| | • • | : Cost | : Cost | • |
| Type of | : Total | of | of, | Total |
| Conversion 1 | : Amount | | :Smoothing | |
| | : Acres | : Dollars | : Dollars | : Dollars |
| Per Acre | • | • | • | • |
| W to GC | * XX | : 60 | : 15 | : xx |
| W to IC | : xx | : " 60 | : 15 | : XX |
| W to P | : xx | : 60 | : xx | : xx |
| P to GC | : xx | : xx | - | : XX |
| P to IC | * XX | : xx | * | : xx |
| GC to IC | : XX | : xx | * XX | : XX |
| GC to P | : XX | : XX | : XX | XXX |
| | • . | t | : | |
| Project | • | | : | • |
| W to GC | : 835 | : 50,100 | : 12,525 | 62.625 |
| W to IC | 23 | : 1,380 | | |
| W to P | : 46 | : 2,760 | | |
| P to GC | : - | xx | : - | - |
| P to IC | : " - | * xx | : - | - |
| GC to IC | 12 🖦 | : xx | : xx | : - |
| GC to P | : ;- | : xx | : xx | |
| | : | : | : | • |
| Total project | · xx | : 54,240 | : 12,870 | 67.110 |
| | | : | : | . , — |
| Annual amortized value 2/ | : xx | · xx | : xx | 3,676 |
| m 1 3 | • | | : | |
| Total annual cost of | • | : | . | |
| conversions | xx | · · xx | * xx : | : 3,676 |
| | : | : | 3. | |

^{1/} W-woodland; GC- general dry-farmed crops; IC - irrigated crops;
(rice); P-pasture.

^{2/} Amortized over 50 years at 5 percent.

Basin: St. Francis River
Project: Eight Mile Creek Ditch
Reach: 1
State: Arkansas

ANALYSIS OF FARM DRAINAGE SYSTEM COSTS

| | .: | *************************************** | B | * | | * - • • • | A : | | Zone | - |
|----------|------------|---|---------------------|----------|--|--------------------------------------|---------------------|---------|------------------------------------|---|
| TOTAL | : Subtotal | : 7 - General crops : 7 - Pasture | : 4 - General crops | Subtotal | :10 - General crops :10 - Rice :10 - Pasture | : 7 - General crops : 7 - Pasture | : 4 - General crops | • •• | : Soil mapping unit : and land use | |
| 6,230 1/ | 1,0681/ | 61 509 | 4144 | £ 291.65 | 1,341 179 268 | 2,314 73 | 957 | Acres | Area | |
| 98,409 | 17,852 | 11 ₉ 656 292 | 5,904 | 80,557 | 17,834 1,487 2,227 | 1,122 | 12,727 | Dollars | Total Cost 2/: | |
| 9,481 | 1,720 | 1,123 28 | 569 | 7,761 | 1,718 143 215 | 4,351 108 | 1,226 | Dollars | Annual Figuivalent Instl. Cost 3/ | |
| 10,960 | 2,037 | 1,345 | T89 | 8,923 | 2,058 57 86 | 5,211 | 1,468 | Dollars | • Annual • Maintenance • Cost | |
| : 20,141 | 3,757 | 2,468 39 | 1,250 | 16,684 | 3,776 200 301 | 9,562 | 2,694 | Dollars | Total Annual | |
| | | | | 77. | | | | | | |

Does not include 10 percent "other" land 2/ Includes engineering and contingency 3/ Amortized at 5 percent over 15 years.

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Basin: St. Francis River

Project: Eight Mile Creek Ditch

Reach: 1

State: Arkansas

TABLE VIII
ANALYSIS OF GROUP DRAINAGE NEEDS AND COSTS

| Item | : Unit | Amount: | Unit :Total Cost :Cost Dollars :Dollars |
|---|--|-------------------|---|
| Excavation 1/ Spreading spoil 1/ Clearing right-of-way 1/ | : :Cubic Yard | . 39 , 600 | 0.20: 7,920 |
| Right-of-way easements | : Acres | 74 | 30.00: 420 |
| Crossings | Each | · · · ·4 | 400.00: 1,600 |
| Swinging water gaps | Each | 6 | 40.00: 240 |
| Pipe drop structures | Each | 4 | 200.00: 800 |
| Flap gates | Each | 4. | 100.00 400 |
| Vegetative plantings | Acres | 6 | 8.00 48 |
| Total construction cost | : xx | XX | xx 11,428 |
| Engineering cost | ************************************** | xx | xx : 1,143 |
| Contingencies and legal | : xx | xx | xx : 1,143 |
| Total installation cost | | | :13,714 |
| Annual equivalent = installa (amortized for 30 years at | _ | : : | 746 |
| Annual maintenance cost | | | : 571 |
| Annual loss of production - | right-of-way 2 | 2/ | 115 |
| Total annual cost of require | ed group facilit | cies | 1,432 |

^{1/} These items included in excavation costs under normal contract procedures.

^{2/} Annual loss of production - right-of-way. 7 acres @ \$16.39 per acre.

Basin: St. Francis River
Project: Eight Mile Creek Ditch
Reach: 1
State: Arkansas

TABLE IX
SUMMARY OF ANNUAL NET PRODUCTION RETURNS
AND ASSOCIATED COSTS

| | (1) | (2) | : (3) |
|----|--|--|-----------------------------------|
| | | | : Discounted |
| | Item . :: | : Total | : Amount |
| | | Dollars | <u>Dollars</u> |
| 1. | Net return with project | : 206,391 | : xx |
| 2. | Net return without project | 150,499 | : xx |
| 3. | Gross benefit to project | 55,892 | : 34,721 2/ |
| | The state of the s | | : |
| 4. | Farm drainage cost a. Installation cost b. Maintenance cost c. Total | хх 9,481 10,960 20,441 | xx 2/ xx xx 12,698 |
| 5, | Group drainage cost a. Installation cost b. Maintenance cost 1/ c. Total | xx 746 686 1 ₅ 432 | xx <u>3/</u> xx xx 1,189 |
| 6. | Conversion cost a. Installation cost b. Maintenance cost c. Total | 3,676 | xx 2/ xx xx 2,284 |

^{1/} Includes loss of production, right-of-way

2/ Discounted at 5 percent to account for estimated 20 year lag to full installation, maintenance, and benefit accrual.

^{3/} Discounted at 3½ percent to account for estimated 10 year lag to full installation, maintenance, and benefit accrual.

Basin: St. Francis River
Project: Eight Mile Creek Ditch
Reach: 2
State: Arkansas

TABLE I PRESENT LAND USE

| | :Soil m | ap:Open | :Wooded | Urban | :Water | :Total |
|--|--------------------|-----------------------|---------|-------|----------|-------------------------------------|
| Zone | | | (Acres) | | :(Acres) | : (Acres) |
| Zone A | 7 : 10 : 15s | 2,655 191 9,246 | .: 19: | - | : | : 2,856 : 210 :14,500 |
| Subtotal - all Urban Water Total - Zone A | soils | 12,092 | : - | 669 | : 16 | :17,566 : 669 : 16 :18,251 |
| Zone B | : 7 | 371 | 32 | • | : - | : 406 |
| Subtotal - all Urban Water Total - Zone B | soils | 37L | : -: | 264 | : 21 | |
| GRAND TOTAL - Reach | 2 | 12,466 | 5,506 | 933 | 37 | :18,942 |

Basin: St. Francis River Project: Eight Mile Creek Ditch Reach: 2 State: Arkansas

TABLE II A ZONE FOR DRAINAGE CALCULATIONS ONLY COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| 1 | | | | | | | | |
|---------------------|--|--------------|---|---------------------------------|--|--|--|--|
| (1) Soil Unit | : (2) : Land use and crop : distribution | (3) Acres | : (4) : (5) : (6) : Production : Unit : Per Acre: Total | | | | | |
| 7 | Open land Crops Cotton Cottonseed Corn Oats (Grain) Oats (Sup. Past.) Perm. Pasture Idle Other 2/ Woodland TOTAL | | Lbs.Lint Ton Bu. Bu. Lbs.Beef: Lbs.Beef: | .3150 : 40 : 30 : 70 : | 99,750 89,77 15,200 12,120 14,140 136,980 | | | |

One soil only; no summary required
Farmsteads, farm roads, waste and non-agricultural
Parenthetical amounts are duplicated acreages
Total area Zone A reduced by 669 acres urban, 16 acres
water, and 14,705 acres already drained or not requiring drainage.

State: Project: Eight Mile Creek Ditch Basin: St. Francis River Reach: Arkansas

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT ZONE FOR DRAINAGE CALCULATIONS ONLY (Based on projected prices) TABLE III A 1

| | | | | | | | | | | | | | 7 | | Unit | Soil | (<u>1</u>) |
|---|-------------------|----------|----------|------|---------------|------------------|--------------|-----------|-----------|------------|------------|-------|-----------|-------------------|------------------|--------------------------|--------------|
| | •• | •• | •• | •• | •• | •• | •• | •• | •• | •• | •• | ** | •• | •• | •• | •• | •• |
| | TOTAL | Woodland | Other 2/ | Idle | Perm. Pasture | Oats (Sup. Past. | Oats (Grain) | Soybeans | Corn | Cottonseed | Cotton | Crops | Open land | | distribution | Land use and crop | (2) |
| | •• | | •• | •• | •• | ·· | •• | •• | •• | •• | •• | •• | •• | •• | •• | •• | •• |
| | 1,202 4/ | 74 | 113 | 20 | 30 | (25) | 102 | 254 | 254 | (355) | 355 | 1,015 | 1,128 | | Acres | <u>l</u> w | (3) |
| | : | : Acres | •• | • | :Lbs.Beef | :Lbs.Beef | · Bu. | Bu. | · Bu. | : Ton | :Lbs.Lint | | | •• | : Unit | •• | : (4) |
| | •• | •• | •• | : | : 220 | : 70 | <u>.</u> | 29 | . 44 | -3600 | . 400 | | •• | •• | :Per Acre: Total | Production | : (5) |
| | | •• | | | : 6,600 | 1,750 | : 3,468 | : 7,366 | : 11,176 | : 127.80 | : 142,000 | **; | | •• | : Total | | : (6) |
| , | •• | : 9.54 | •• | •6. | 2005 | 2005 | 90 | 2.30 | : 1.45 | : 63.00 | . 25 | •• | •• | Dollars | :Per Unit | :Value of | : (7) |
| | : 82 , 199 | 706 | * | •• | 1,323 | 351 | 3,121 | : 16,942 | 16,205 | 8,051 | 35,500 | •• | ** | Dollars | : Total | Value of production | : (8) |
| | •• | . 5,51 | •• | •• | : 31.35 : | : 5.37 : | : 21,16: | : 33,06 : | : 36.85 : | •• | : 104.72 : | •• | •• | :Dollars :Dollars | :Per Acre: Total | :Cost of production: Net | : (9) : |
| | 58,573 :23,626 | 408 | ,, | | 046 | 134 | 2,158 | 8,397 | 9,360 | | 37,176 | | | | | roduction | (OT) |
| | :23,626 | 298 | ••• | •• | 383 | : 217 | . 963 | 54568 | 54869 | •• | 6,375 | •• | •• | Dollars | Return | : Net | (日) |

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1/ One soil only; no summary required
2/ Farmsteads, farm roads, waste and non-agricultural
3/ Parenthetical amounts are duplicated acreages
1/ Total area Zone A reduced by 669 urban, 16 acres with the control of the

Total area Zone A reduced by 669 urban, 16 acres water, 146 woodland not anticipated to be cleared, and 16,218 acres already drained, not requiring drainage, or not anticipated to be drained.

TABLE IV A Y

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE CALCULATIONS ONLY (Based on projected prices) :

| : TOTAL | : Woodland : | : Other 2/ : | : Idle : | : Perm. Pasture : | : Oats (Sup. Past.): | : Oats (Grain) : | : Soybeans : | : Corn : | : Cottonseed : | : Cotton : | : Crops : | 7 : Open land : | •• | Unit: distribution : | Soil: Land use and crop : | (1): (2) : | |
|----------------|--------------|--------------|----------|-------------------|----------------------|------------------|--------------|----------|----------------|------------|-----------|-----------------|------------|----------------------|---------------------------|--------------|---|
| 1,202 1/: | | 120 | 22 | υ ω | (33) | 108 | 270 | 270 | (379) | 379 | 1,082 | 1,202 | | Acres | lω | (3) | |
| /: | : Acres | •• | •• | :Lbs.Beef | :Lbs.Beef | · Bu• | : Bu. | · Bu• | : Ton | :Lbs.Lint | •• | •• | •• | : Unit | | : (4) | |
| - | •• | •• | •• | 395 | . 145 | : 49 | : 29 | 58 | : .4860 | : 540 | •• | | •• | :Per Acre: | Production | : (5) | |
| ••. : | •• | •• | • | : 13,035 | 4,785 | 5,292 | 7,830 | 15,660 | : 184.19 | : 204,660 | | •.9 | | Total | | (6) | |
| •• . : | ·•• | •• | •• | 2005 | . 20C5 | 90 | 2.30 | 1.45 | : 63.00 | . 25 | •• | •• | Dollars | :Per Unit | : Value of production | : (7) | 2 |
| : 111,821 | | | - | : 2,614 | 959 | · 4,763 | 18,009 | : 22,707 | 11,604 | : 51,165 | •• | | Dollars | : Total | production | (8) | |
| •• | •• | •• | ••• | 52,78: | : 13,43: | : 29.87: | 33.06: | : 48.43: | | : 141.74: | •• | | :Dollars : | :Per Acre: | :Cost of p | : (9) : | |
| 81,132 :30,689 | | •• | •• | 1,742; | : 6443 | 3,226: | 8,926 : | 13,076 | • | 53,719 | | | Dollars | Total | :Cost of production: Net | (OT) | |
| 30,689 | | | | 872 | 516 | 1,537 | 9,083 | 9,631 m | | 9,050 | | | :Dollars | Return | Net | (江) | |

one soil only; no summary required

Farmsteads, farm roads, waste and non-agricultural Parenthetical amounts are duplicated acreages

Total area Zone A reduced by 669 acres urban, 16 acres water, 146 acres woodland not anticipated to be cleared, and 16,218 acres already drained, not requiring drainage or not anticipated to be drained.

ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1) Soil Unit | : (2) :Land use and crop : distribution | (3) <u>3</u> / Acres | (4) : Unit | : (5) Production :Per Acre | : (6) : Total |
|---------------------|--|---|--|--|--|
| 7 | : Open land : Crops : Cotton : Cottonseed : Corn : Oats (Grain) : Oats (Sup. Past.) : Perm. Pasture : Idle : Other 2/ : Woodland : TOTAL | 374 337 40 (40) 54 57 (28) 108 78 37 32 406 <u>L</u> / | Lbs.Lint Ton Bu. Bu. Lbs.Beef Lbs.Beef | 350 •3150 •40 30 70 180 | 14,000 12.60 2,160 1,710 1,960 19,440 |

One soil only; no summary required

Farmsteads, farm roads, waste and non-agricultural
Parenthetical amounts are duplicated acreages
Total area Zone B reduced by 264 acres urban, 21 acres water

TABLE III B

COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION PROJECT (Based on projected prices) ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS

| TOTAL | Other 2/ Woodland | : Oats (Sup. Past.) : Perm. Pasture | CO | : Corn | : Cotton : | Crops: | | 00 | (1): (2): Soil: Land use and crop: |
|----------------|-------------------|-------------------------------------|-------------------------------|--------|-----------------|--------|----------|------------|------------------------------------|
| 374 5/ | 37 | 10) (10) |) 3 ² ² | 67 | (118) | 337 | 2 | Acres | (3) 3/ |
| /: | Acres | :Lbs.Beef | Bu. | · Bu. | : Lbs.Lint | | •• | : Unj.t | (4) |
| •• •• | | 265 | 38 | 47: | 3915 | | •• | :Per Acre: | : (5) : Production |
| | | 2,650 | 1,292 | 3,149 | 51,330 46,20 | | ; | Total | (6) |
| •• •• | •• •• •• | 2005 | | . 1.15 | 63,00 | •• •• | Dollars | :Per Unit | : (7) :Value of |
| : 27,786 | | 531 | 1,163 | 995,4 | 12,832 | •• •• | Dollars | | (7) : (8) Value of production |
| •• | | 36.86 | 23,23 | 39.57: | 113,07 | | :Dollars | Per Acre | : (9) : (10) : (11) : (11 |
| 20,004 : 7,782 | | 75 369 | 790 | 2,651 | 13,342 | | Dollars | Total | (10) |
| 7,782 | ** | 162 | 373 | 1,915 | 2,401 | | Dollars | Return | (11) Net |

one soil only; no summary required

Farmsteads, farm roads, waste and non-agricultural

Parenthetical amounts are duplicated acreages
24.87 percent cropland drained

Total area Zone B reduced by 264 acres urban, 21 acres water, and 32 acres woodland not anticipated to be cleared.

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PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS (Based on projected prices) TABLE IV B 3/

| | | | | | | | | | | | 7 | | Unit | Soil | 日 | |
|----------------|--------------|----------|-------------------|----------------------|------------------|--------------|-----------|----------------|------------|---------|---------------|------------------------------|------------------|--------------------------|---------|---|
| : TOTAL : | : Woodland : | : Idle : | : Perm. Pasture : | : Oats (Sup. Past.): | : Oats (Grain) : | : Soybeans : | : Corn | : Cottonseed : | : Cotton : | : Crops | : Open land : | •• | : distribution : | : Land use and crop : | : (2) : | |
| 374 5/: | 1 37 | | 10 | (01) | 4 | 4/8 | 48 | | 118 | 337 | 374 | | Acres | 2/ | (3) | _ |
| | Acres | •• | :Lbs.Beef | :Lbs.Beef | . Bu. | Bu. | : Bu. : | : Ton | :Lbs.Lint | •• | ** | •• | : Unit | •• | : (4) | |
| - | ** ** | •• | | | | | : 54 : | 1 | 500 | · F | •• | •• | :Per Acre: | Production | : (5) : | |
| | | | 3,400 | 1,200 | 1,530 | 2,436 | 4,536 | 53.10 | 59,000 | | | | Total | | (6) | |
| •• | •• •• : | | . 2005 | . 2005 | 90 | 2.30 | : 1.45 : | : 63,00 | . 25 | ** | ** | : Dollars | Per Unit | :Value of production | : (7) | |
| 32,575 | | | 682 | 241 | 1,377 | 5,603 | 6,577 | 3,345 | 14,750 | | | Dollars | | 1 | (8) | |
| •• | 1 *** ** | - | : 46.05 : | : 10.74 : | 27.36: | : 33.06 :: | : 45.53 : | | 130,65 | •• | •• | : Dollars: Dollars : Dollars | Per Acre: | :Cost of production: Net | : (9) : | |
| 23,516 : 9,059 | | , | 460 | 107 | 930 | 2,777 | 3,825 | | 15,417 | | | Dollars | Total | oduction | (OL) | |
| 9,059 | | : | 222 | 1.34 | 7,447 | 2,826 | 2,752 | ; | : 2,678 | •• | •• | Dollars | Return | Net | (江) | |

Farmsteads, farm roads, waste and non-agricultural

Parenthetical amounts are duplicated acreages

One soil only; no summary required

70.05 percent cropland drained Total area Zone B reduced by 264 acres urban, 21 acres water, and 32 acres woodland not anticipated to be cleared.

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State: Basin: St. Francis River Reach: Project: Eight Mile Creek Ditch Arkansas

REACH SUMMARY BY SOIL MAPPING UNITS TABLE V.

| 1/ mata1 | TOTAL | Subtotal | 7 | | Subtotal | 7 | | Soil Unit | (T) | |
|--|------------|----------|---------|-----------------------|----------|---------|------------------------------------|-------------------------|------------------------|---|
| ال المناسب عدم المناسب | 1,576 | 374 2/ | 374 | • | 1,202 1 | 1,202 | | Acres | (2) | |
| ٠ ١ ١ ١ ١ | 109,985 | 27,786 | 27,786 | | 82,199 | 82,199 | | (Produ | (3) Futu | |
| | 78,577 | 20,004 | 20,004 | | 58,573 | 58,573 | • | (Production in Dollars) | Future Without Project | |
| in the course of | 31,408 | 7,782 | 7,9782 | ZONE B - (s | 23,626 | 23,626 | ZONE A - | ars) Net | (5) | • |
| to be seen and and | 396 والملا | 32,575 | 32,575 | (subject to flooding) | 111,821 | 111,821 | ZOME A - (not subject to flooding) | : (Product | : (6) Future | |
| allowal mod- | 104,648 | 23,516 | 23,516 | ing) | 81,132 | 81,132 | flooding) | (Production in Dollars) | Future With Project | |
| - | 39,748 | 9,059 | 9,059 | | 30,689 | 30,689 | | Net | (8) | |
| | 0,340 | : 1,277 | : 1,277 | • | 7,063 | 7,063 | • | : in Net | : (9) :Difference | * |
| | | | | - | 319 | - | | | | |

^{1/} Total area Zone A reduced by 669 acres urban, 16 acres water, 146 acres woodland not anticipated to be cleared, and 16,218 acres already drained, not requiring drainage or not anticipated to be drained.

Total area Zone B reduced by 264 acres urban, 21 acres water, and 32 acres woodland not anticipated to be cleared.

TABLE VI LAND CONVERSIONS WITH PROJCET

| (1) | (2) | (3) Cost | 2 | : (5) |
|----------------------------------|----------------------|---|-----------------|---------------|
| Type of Conversion | Total Amount | of Clearing | of Smoothing | Total Cost |
| | Acres | : Dollars : | Dollars | : Dollars |
| Per Acre | | 1 . | | : |
| W to GC | , XX | : 60 11 | 15 | : xx |
| W to IC | XX | • | - + | : XX |
| W to P P to GC | XX | 60 | XX | : XX |
| P to IC | 2000 2000 2000 | XX XX | | xx xx |
| GC to IC | XX | : xx | . 3CX | XX |
| GC to P | 3000 | : XX | ЖX | : XX |
| Project | | | | : |
| W to GC | 71 | : 4,260 | 1,065 | 5,325 |
| W to IC | - | : - : | - | : - |
| W to P | 3 | : 180 : | xx | : 180 |
| P to GC P to IC | | : XX : | - | - |
| GC to IC | | . XX | xx | |
| GC to P | | : XX | XX | - |
| Total project | 2CX | म, प्रि | 1,065 | 5,505 |
| Annual amortized value 2/ | xx | : XX | xx | 302 |
| | | : | | : |
| Total annual cost of conversions | xx | : XX | XXX | 302 |

ANALYSIS OF FARM DRAINAGE SYSTEM COSTS TABLE VII

| | | В | | Α | | Zone | |
|-----------------|------------|--------------------------------------|----------|--------------------------------------|---------|---|--|
| TOTAL | : Subtotal | : 7 - General crops : 7 - Pasture | Subtotal | : 7 - General crops : 7 - Pasture | • •• | : Soil mapping unit and land use | |
| 1,2341/: 23,629 | ¥. 152 T∕ | 4 877 | 1,082 1/ | 1,049 | Acres | Area | |
| 23,629 | 2,912 | 2 , 851 | 20,717 | 20,210 | Dollars | Total Cost 2/ | |
| 2,277 | 281 | 275 | 1,996 | 1,947 1,947 | Dollars | : Annual : Equivalent :Instl. Cost 3/ | |
| 2,682 | 331 | 329 N | 2,351 | 2,332 | Dollars | Annual : Maintenance : Cost : | |
| 4,959 | 612 | 604 84 | 4,347 | 4,279 68 | Dollars | Total Annual Cost | |

Does not include 10 percent "Other" land 2/ Includes engineering and contingency Amortized at 5 percent over 15 years

TABLE IX
SUMMARY OF ANNUAL NET PRODUCTION RETURNS
AND ASSOCIATED COSTS

| | (1) Item | (2) Total | : (3) : Discounted : Amount |
|----------|---|--------------------------------------|--|
| 1. 2. 3. | Net return with project Net return without project Gross benefit to project | Dollars 39,748 31,408 8,340 | Dollars xx xx 6,611 1/ |
| 40 | Farm drainage cost a. Installation cost b. Maintenance cost c. Total | 2,277 2,682 4,959 | xx <u>1</u> / xx xx xx 3,931 |
| 5. | Group drainage cost a. Installation cost b. Maintenance cost c. Total | XX | xx <u>2</u> / xx xx |
| 6. | Conversion cost a. Installation cost b. Maintenance cost c. Total | 302 302 | xx <u>1</u> / xx xx 239 |

^{1/} Discounted at 5 percent to account for estimated 10 year lag to full installation, maintenance, and benefit accrual.

2/ No group drainage; no table VIII required.

State:

Basin: St. Francis River
Project: Locust Creek Ditch
State: Arkansas

TABLE I PRESENT LAND USE

| | :Soil map- | Onen | :Wooded . | Allrhon | :Water | :Total |
|------------------|--------------|----------|------------|--------------|--------------------------|---------------|
| Zone | :ping unit | | : (Acres) | | | |
| 20110 | · pring wire | (Acres) | · (AOI OS) | (ACI CS) | • (ACI CS) | (ACI CS) |
| Zone A | : 3 | 194 | : 82 | : | • | : 276 |
| LOMO A | 1 4 | 3,609 | | | • | |
| | 7 | | 2,198 | ** =, | - | : 3,977 |
| | | | | -: | - | : 9,417 |
| , | : 10 : | | : 3,967 | • | - | :16,247 |
| | | 941 | | • | * ; } **** | : 951 |
| | : 1150 | 348 | | - | • - | : 358 |
| | : 12SU : | 2,117 | | | : - | : 2,332 |
| | | | :10,726 | : - | : - | :29,202 |
| Subtotal - all | soils | 45,184 | :17,576 | - | : - | :62,760 |
| Urban | | . | * : - | 8.0. · · · · | : - | \$ |
| Water | | - | : - " | : - | : 56 | . . 56 |
| Total - Zone | A | 45,184 | :17,576 | | : 56 | :62,816 |
| | : | | : | : | 3 1 1 1 1 1 1 1 1 | |
| Zone B | : 3 : | 19 | \$ 9 | : - | : | : 28 |
| | : 4 : | 3,671 | : 1,335 | : - | : - | : 5,006 |
| | : 6 : | 58 | : 191 | * - | : - | : 249 |
| | : 10 : | 87 | : 9 | : - | : - | 18 96 |
| | : 11 .: | 631 | : - | : - | : - | : 631 |
| | : 12SU : | 117 | : 43 | : - | : - | : 160 |
| Subtotal - all | soils : | 4.583 | : 1,587 | : - | : - | : 6,170 |
| Urban | | - | : - | : - | : - | : |
| Water | | - | : - | : - | : 134 | : 134 |
| Total - Zone | В | 4.583 | : 1,587 | : - | : 134 | |
| | : | -, | : | • | • 101 | • 0,004 |
| GRAND TOTAL-Proj | ect : | 49.767 | :19,163 | | • 100 | :69,120 |
| | | 20,101 | • 10,100 | | . 130 | 103,120 |
| | | | • | • | š | : |

Basin: Project: State: St. Francis River
Locust Creek Ditch
Arkansas

SUMMARY - TABLE II A ZONE FOR DRAINAGE CALCULATIONS ONLY COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| | · | | | |
|--------------------------|------------------|------------|---------------|--|
| (1) (2) | | : (4) | : (5) | : (6) |
| Soil : Land use and crop | 2/ | : | Production | on "" |
| Unit distribution | : Acres | Unit. | Fer Acre | : Total |
| * | • • • | | 3 75 3 | *** *** ** · · · · · · · · · · · · · · |
| All: Open land; | : 21,877 | * * | | * :: |
| : Crops | : 19,690 | | : 3/ | 8 * * * * * * * * * * * * * * * * * * * |
| : Cotton : | : 3,430 | :Lbs.Lint | 32 2 | :1,105,520 |
| : Cottonseed | (3,430) | : Ton | : 2901 | 994.96 |
| : Corn | 1,329 | a Bu. | : :41 | : 54,066 |
| : Rice | 531 | : Cwt. | \$ 25 | : 13,344 |
| : Soybeans | : 681 | : Bu. | : 17 | : 11,853 |
| : Oats (Grain) | 4,140 | Bu. | s · 23 | 96,950 |
| : Oats (Sup.Past. |) (2,075) | | | : 124,250 |
| : Perm. Pasture | 4.787 | | | : 861,660 |
| : Idle | 4.792 | 1. | | 31 N . 1 . 1 |
| : Other 1/ | 2,187 | | 1 | |
| :Woodland | 6,615 | Acres | : | 1 mrs. 1. |
| * TOTAL | : 28,492 4 | | 2 2 2 2 2 | * 1 |
| | * : * * | 2 . | 2. | • |
| | William Commence | | | |

^{1/} Farmsteads, farm roads, waste and non-agricultural
2/ Parenthetical amounts are duplicated acreages
3/ Calculated from Columns 3 and 6; rounded to nearest unit
4/ Total area zone A-reduced by 56 acres water, and 34,268 acres already drained or not requiring drainage.

Basin: St. Francis River
Project: Locust Creek Ditch
State: Arkansas

SUMMARY - TABLE III A

COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION, COSTS AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT ZONE FOR DRAINAGE CALCULATIONS ONLY PRODUCTION

(Based on projected prices)

| | 00, 00, 00, 00 | .ee .ee .ee .ee .ee | A11: | (1): Soil: Unit: |
|------------------------------------|--|---|-----------------|---|
| Other 1/ Woodland TOTAL | Oats (Grain) : Oats (Sup.Past.): Grain Sorghum : Perm. Pasture : | Cotton Cottonseed Corn Rice Soybeans | Open land | (2) : Land use and crop : distribution : |
| 1,030 2,392 12,689 5 | 1,703 (1,069) 258 867 | 2,675 (2,675) 1,045 1,490 | 10,297 | (3) 2/ Acres |
| Aores | Bu. Lbs.Beef Bu. Lbs.Beef | Lbs Lint Ton Bu. Cwt. Bu. | | (4) Unit |
| 00 00 00 00 | 24 56 19 | 356 3507 41 25 | 3 | : (5) : Production :Per Acres |
| | 41,314 60,295 4,902 163,615 | 953,305 857,97 42,818 12,925 35,455 | | (6) Total |
| 6 6 6 5 5 | 2005 1 2005 2005 | 63.00 1.45 2.30 | Dollars | (7) Walue of Per Unit |
| 15,906 589,962 | 37,183 12,089 7,500 32,805 | 238 326 54 052 62 086 48 469 81 546 | Dollars | (8) production |
| 3 998 | 16.66 3.90 18.42 26.72 | 96-15 34-72 87-64 28-85 | Dollars Dollars | (7) (8) (9) (10) (1 Value of production Cost of production Nets Per Unit: Total Per Acres Total Ret |
| 9,520 : 6,386 451,763 : 138,199 | 28,376 . 4,171 . 4,752 . 23,166 . | 257, 193 : 36, 287 : 45, 310 : 42, 988 : | Dollars | : (10) : production: e: Total : |
| 6,386 138,199 | 8,807 7,918 2,748 9,639 | 35, 185 25, 799 3, 159 38, 558 | Dollars | on: Net Return |

Farmsteads, farm roads, waste and non-agricultural

Parenthetical amounts are duplicated acreages.

Calculated from Columns 3 and 6; rounded to nearest unit Calculated from Columns 3 and 10; rounded to nearest cent

Total area zone A reduced by 56 acres water, 4,223 acres woodland not anticipated to be cleared, and 45,848 acres already drained, not requiring drainage or not anticipated to be drained.

Basin: St. Francis River
Project: Locust Creek Ditch
State: Arkansas

ZONE FOR DRAINAGE CALCULATIONS ONLY

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION (Based on projected prices)

| 1/ | bang | | 10 | | • • • | ** | ű# | • | •6" | ma' | 66 . | 90° | 491 | 087 | 86" | A11: | •• | Unit: | Soil: | (1): | |
|---------------------------|------|-----------------|----------|----------|--------|-----------------|-----------------|--------------------|--------------|----------|-------------|---------|------------|-----------|----------|-------------|-----------|----------------|---|------------------|--|
| Farmsteads form roads | | TOTAL | Woodland | Other 1/ | : elpr | Perm. Pasture : | Grain Sroghum : | Oats (Sup.Past.) : | Oats (Grain) | Soybeans | Rioe : | Corn | Cottonseed | Cotton | Crops | Open land : | | distribution : | Soil: Land use and crop : | (2) | |
| I | ١٥ | 12,689 | | 1,269 | : 988 | 1,081 | 323 * | | 2,110 | 1,827 : | 645 | 1,281 : | (3, 267) | | 11,420 : | 12,689 | | Acres : | 2/ : | (3) | |
| weete and non-serioulture | | | Acres | • | | Lbs.Beef | Bu | Lbs.Beef | Bu. | Bu. | Cwt. | , lan | - | Lbs.Lint | ah' | | | Unit | 144 | (4) | |
| 11+1110 | | •• | •• | | •• | 346 : : | 19 | . 94. * | 39 : | 26 : | .35 | 55 | 4577 | 509 | 3/ 3 | | | Per Acres | Production | (5) | |
| | | • | | | | 373,755 | 6,137 | 122,770 | 82,540 | 47,178 | 22,575 | 70,653 | 1,495.32 | 1,661,480 | | | ٠ | Total | ., | (6) | |
| | | •• | • | | • | 2005 | * 1.53 's | : .2005 : | * 90 * | 2.30 : | * 3.75 : | 1.45 : | * 63.00 : | * 25 * | • | • • • • | Dollars : | Per Unit : | *Val ue of p | 2 (7) · : | |
| | | 988,415 | | | | 74,938 | 9,390 | 24,615 | 74,286 | 108,510 | 84,656 | 102,446 | 94,205 | 415,369 | | | Dollars | Total , | Value of production : Cost of production; | (8) | |
| | | •• | | •• | • | 46.75 : | 18.42 : | 7.97 | 24.02 : | 30.69 | 111-17 % | 46.09 : | | 133,02 | 4/ | •6". | :Dollars | Per Acre: | Cost of pr | (9) | |
| | •• | 738,951 249,464 | •• | *** | ••• | 50,540: | 5,950: | 10,390: | 50,682: | 56,0663 | 71,705: | 59,043; | •• | 434,575 | •• | •• | Dollars | Total : | | (10): | |
| | | 249,464 | 1 | | 4 | 24,398 | 3,440 | 14,225 | 23,604 | 52,444 3 | 12,951- | 43,403 | * | 74,999 | | • | Doll ars | Return | Net | (11) | |

Farmsteads, farm roads, waste and non-agricultural

Parenthetical amounts are duplicated acreages.
Calculated from Columns 3 and 6; rounded to nearest unit

Calculated from Columns 3 and 10; rounded to nearest cent
Total area zone A reduced by 56 acres water, 4,223 acres woodland not anticipated to be cleared, and
45,848 acres already drained, not requiring drainage or not anticipated to be drained.

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Basin: Project: State: St. Francis River
Locust Creek Ditch
Arkansas

SUMMARY- TABLE II B

ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS
COMPUTATION OF AGRICULTURAL PRODUCTION: EXISTING CONDITIONS

| (1): (2) Soil: Land use and crop | | Production | 1 |
|--|---|---|--------|
| Unit: distribution | | t :Per Acre | Total |
| cotton Cottonseed Corn Soybeans Oats (Grain) Cats (Sup.Past.) Grain Sorghum Perm. Fasture Idle Other 1/ Woodland | : 4,125 : 1,510 : Lbs.L :(1,510) : Ton : 447 : Bu. 587 : Bu. 722 : Bu. (206) : Lbs.B : 104 : Bu. | int: 444 24000 47 26 38 eef: 95 21 eef: 240 | 21,054 |

Farmsteads, farm roads, waste and non-agricultural Parenthetical amounts are duplicated acreages. Calculated from Columns 3 and 6; rounded to nearest unit Total area zone B reduced by 134 acres water.

Basin: St. Francis River
Project: Locust Creek Ditch
State: Arkansas

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITHOUT PROJECT (Based on projected prices) COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE AND FLOOD CONTROL C LCULATIONS SUMMARY - TABLE III B

| 1 | | ** | • | | | | | | •• | • | 4. | A11 | | Unit | Soil : | (1) | |
|----------------------|------------------|----------|---------|-----------|------------------------|--------------|--------------|-------------------------|------------|------------|----------|-------------------|-------------|--------------|---|--------------|------|
| Townstoods form mond | TOTAL | Woodland | Other 1 | Idle | Grain Sorghum | Oats (Grain) | Soybeans | Corn | Cottonseed | Cotton | Crops | Open land | | distribution | Land use and crop | (2) | |
| | 5,685 5/ | 695 | 499 | 400 | 190 | 449 | 898 | 463 | (2,091) | 2,091 | 4,491 | 4 ,990 ··· | | Acres | 2 | 3 (3) | |
| | | Acres | - | : | Bu. | Bu. | Bu. | Bu. | . Ton . | Lbs.Lint | | | | Unit | | (4) | |
| | | 948 ° | •• | | 25 * | 45 * | 29 | \$ 54 \$ | : .4807 : | : 534 :1 | 3 . 3/ : | • | | :Per Acre: | Production | : (5) : | |
| | | | | : : : : : | 4,750 | 20,205 | 26,180 | 25,133 | 1,005,10 | 116,780 | | | | Total | •. | (6) | ** * |
| | 9 OD. | * 6.65 | '66' | | 1.53 | 90-1 | 2.30 | 1.45 | \$ 63,00 | . 25 | : | | Dollars | Per Unit | Walue of | : (7) | |
| | 469,246 | 4,622 | | | 7,267 | 18,184 | 60,214 | 36,443 | 63,322 | 279,194 | • | | Dollars | Total | Value of production : Cost of production: | (8) | |
| | P 44 | 3,98 | •• | ** | : 22 ₀ 13 : | 27.36 | 33.21 | : 46,18 : | •• | : 141.61 : | : 4/ | •• | : Dollars : | Per Acres | Cost of p | : (9) : | |
| | 366,558 :102,688 | 2,766 : | •• | •• | 4,205 : | 12,285 : | 29,824 : | 21,381 : | •• | 296,097 : | •• | •• | Dollars : | Total :: | roduction: | (10) : | |
| | 102,688 | 1,856 | | | 3,062 | 5,899 N | 30, 390 œ | 15,062 | | 46,419 | | | Dollars | Return | Net | (11) | |

Farmsteads, farm roads, waste and non-agricultural Parenthetical amounts are duplicated acreages

Calculated from 3 and 6; rounded to nearest unit

Calculated from Columns 3 and 10; rounded to nearest cent

Total area zone B reduced by 134 acres water and 485 acres woodland not anticipated to be cleared.

States Project: Basin: Locust Creek Ditch St. Francis River Arkansas

PRODUCTION COSTS, AND NET RETURNS: FUTURE CONDITIONS WITH PROJECT COMPUTATION OF AGRICULTURAL PRODUCTION, VALUE OF PRODUCTION ZONE FOR DRAINAGE AND FLOOD CONTROL CALCULATIONS (Based on projected prices) SUMMARY - TABLE IV B

| | | | | • | | | 44 | | A11 : | | Unit | Soil : | (1) |
|-----------------|----------|---------------|--------------|----------|--------|------------|-----------|-----------|-----------|----------|--------------|---|------|
| TOTAL | other 1/ | Grain Sorghum | Oats (Grain) | Soybeans | Corn | Cottonseed | Cotton | Crops | Open land | | distribution | Land use and crop | (2) |
| C71 | ,00 | •• | ** | • | 40 | . (2 | ** | •• ••• | ee . | ** | •• A | •• | •• |
| 5,685 5/ | 569 | 222 | 511 | ,023 | 525 | (2,593) | 2,593 | 5,116 | 5,685 | | Acres | 2 | (3) |
| | •• •• | •• | •• | •• | •• | •• | #Lb | •• | •• | •• | •• | | ** |
| Acres | | Bu. | Bu. | Bu. | Bu. | Ton | Lbs.Lint | | | | Unit | | (4) |
| ** ** ** | ** ** | •• | •• | •• | •• | •• | •• | •• | •• | ** | Per | Proc | 22 |
| | | . 25 | 48 | 29 | 59 | 5154 | 573 | 3/ | • | | Acre | Production | (5) |
| •• •• | .** ** | ** | ••. | •• | ** | ** | :1,4 | •• | •• | ••• | | no | ** |
| | | 5,550 | 24,763 | 29,805 | 30,753 | 1,336,40 | 1,484,890 | | | | Total | | (6) |
| | •• •• | •• ; | •• | •• | •• | •• | •• | •• | •• | : Do | : Pe | .Va | •• |
| | | 1.53 | .90 | 2.30 | 1.45 | 63,00 | .25 | | | Dollars | Per Unit | *Value of production *Cost of production* | (7) |
| 55 | •• •• | | •• | ** | •• | ** | •• 3 | •• | ** | Do | •• | prod | ** |
| 599,336 | | 8,491 | 22,286 | 68,551 | 44,592 | 84,194 | 371,222 | 3. | | Dollars | Total | uction | (8) |
| | •• •• | . 80 | ** 22 | ** | •• 4 | •• | • 14 | •• | •• | :Dol | Per | *Cos | * |
| | , | 22.13 | 9.53 | 33.19 | 9.34 | | 149,65 | 4/ | | :Dollars | :Per Acre: | t of | (9) |
| 467 | •• •• | 4 | * 15 | 33 | 25 | •• | •• | •• | •• | : Dol | | produ | - |
| 467,898:131,438 | | 4,913 | 15,091 | 33,956 | 25,903 | | 388,035 | | | Dollars | Total | nction | (01) |
| 131, | | 3, | 7, | 34, | 18, | 30 | : 67,381 | | - | Dol | Return | : Net | 1 |
| 438 | | 578 | 7,195 32 | | 18,689 | | 381 | | | Dollars | urn | | 1 |

Calculated from Columns 3 and 6; rounded to nearest unit Parenthetical amounts are duplicated acreages Farmsteads, farm roads, waste and non-agricultural

Calculated from Columns 3 and 10; rounded to nearest cent

Total area zone B reduced by 134 acres water and 485 acres woodland not anticipated to be cleared.

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Basin:
Project:
State:

State:

Arkansas

(1):

(2):

TABLE V
PROJECT AREA SUMMARY BY SOIL MAPPING UNITS

| 122 | T | TOT | Subtotal: | 11 | Subtotal | 10 | 1 112 | Soil | (I) |
|---|---|-------------------|---------------------|-------------------|--|---------|-------------------|------------------------|---------------------------------------|
| Total | Total | TOTAL: | | • •• •• | al. | • •• •• | •• | | |
| area z | area z | 18,374 | 5,685 : 2/ | 4,916 769 | 12,689 | 7,169 | 1,323 | Acres | (2) |
| one B | one A | | 122 | | K | | | | 1 |
| Total area zone B reduced by 134 acres water and 485 acres woodly | reduced by | 1,059,208 | 469,246 | 388,860 80,386 | 589,962 | 234,865 | 103,383 | Gross | (3) (3) |
| y 134 | y 56 | ** ** | | • • • • • | ** | • • • | •• | oduct | ture |
| acres we | acres wat | 818,321 | 366,558 | 302,513 64,045 | 451,763 | 193,207 | 79,575 | (Production in Dollars | (4) : uture Without Project |
| ater | ter, | •• •• | | *** | • • | • • • | •• | ollar | roje |
| and 485 a | 4,223 acr | 240,887 | 102,688 | 86,347 16,341 | 138,199 ZONE | 41,658 | 23,808 | Ne | (5) |
| cres | es wo | | | • •• •• · | ₩ 1 | • •• •• | > | | |
| woodland n | Total area zone A reduced by 56 acres water, 4,223 acres woodland not anticipated to be cleared, and 45,848 acres | 1,587,751 | 599,336 | 518,950 : | 988,415 : 738,98 (subject to flooding) | 446,186 | 152,401 | | (6) Futi |
| ot ar | anti | ee Jui | •• •• • | | | | 8 40 | uc tic | ure w |
| and not anticipated to be cleared. | cipated | 7,751 : 1,206,849 | 467,898 | 403,853 | 738,951 | 337,175 | 2,401 s 118,871 : | S : Cost : | Future With Project |
| d to | to be | 3 38 | ه این ها د پین د | | 22 | | | lars | + + + + + + + + + + + + + + + + + + + |
| be cles | e cleare | 380,902 :140,015 | 131,438 | 115,097 16,341 | 249,464 :111,265 | 109,011 | 33,530 | Net | (8) |
| red. | e pe | :140 | · · · 28 | 28 | :11.1 | : 34 | 9 | Net | |
| | nd 45,8 | ,015 | 28,750 | 28,750 | 265 | 67,353 | 9,722 | Net Production | (9) |
| | 48 acres | | | -330 | - | : | , | tion | |

State:

St. Francis River Project: Locust Creek Ditch Arkansas

TABLE VI LAND CONVERSIONS WITH PROJECT

| (1) | : (2) | (3) | : (4) | : (5) |
|---|----------|--|-----------------|--------------------------------------|
| (-/ | | Cost | : Cost | . (0) |
| Type of | Total | of | • of | : Total |
| Conversion 1/ | 3 Amount | 4.4 | :Smoothing | : Cost |
| Conversion 1/ | Acres | Dollars | : Dollars | : Dollars |
| Per Acre | Acres | Dollars | Dollars | DOLLARS |
| W to GC | | | • | |
| | : XX | 60 | | * XX |
| W to IC | * xx | 60 | | * / XX |
| W to P | * . xx | 60. | : XX | : XX |
| P to GC | 8 · XX | XX XX | : | * XX |
| P to IC | * xx | xx | : -, | xx s |
| GC to IC | 1 . XX. | xx | : XX | * : xx |
| GC to P | * xx | xx. | : xx | * . xx |
| : | | | : | 2 |
| Project W to GC W to IC W to P P to GC P to IC GC to IC GC to P | 2,745 | 164,700 7,680 12,840 xx xx xx xx | : 1,280 : xx | 192,150 8,960 12,840 12,840 |
| Total project | xx : | 185,220 | 28,730 | : 213,950 |
| Annual amortized value | xx | xx | xx | : 11,720 |
| Total annual cost of conversions | : XX : | xx | xx | : : 11,720 |

W- woodland; GC - general dry-farmed crops; IC - irrigated crops; (rice); P - pasture.

Amortized over 50 years at 5 percent

| [S][S][P] | | | æ | | | | A | Zone (1) | Basin: Project: State: |
|---|---------|-----------|---------------------|----------|--|----------------------------------|----------------------|--|---|
| Does not include 10 percent "other" Includes engineering and contingency Amortized over 15 years at 5 percent | • TOTAL | *Subtotal | * 4 - General crops | Subtotal | :10 - General crops :10 - Rice :10 - Pasture | 7 - General crops 7 - Pasture | : 4 - General crops | ; (2) ; ;Soil mapping unit ; and land use | St. Francis River Locust Creek Ditch Arkansas |
| "other" land ntingency 5 percent | 13,059 | 1,639 | 1,639 | 11,420 1 | 4,839 645 968 | 3,664 | Acres 1,191 | Area | ANAL YSIS |
| 1 d | 187,717 | 21,797 | : 21,797 | 165,920 | 64 5,354 8,042 | ; 70,590 ; 1,737 | Dollars 15,839 | : Total :Cost :Installation 2/ | OF THE CASE OF |
| | 18,085 | 2,100 | 2,100 | 15,985 | 6,200 516 775 | 6,801 | Dollars 1,526 | : (5) : Annual 2/:Equivalent 2/:Instl.Cost | CE SYS TE |
| Mar 1 Aug | 20,495 | 2,515 | 2,515 | 17,980 | 7,425 206 309 | 8,145 | : Dollars : 1,828 | : (6) : Arnual : Maintenance : Cost | |
| | 38,580 | . 4,615 | 4,615 | 33,965 | 13,625 722 1,084 | 14,946 234 | : Dollars : 3,354 | : (7) : Total : Annual : Cost | ` |

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Basine Project: State:

St. Francis River
Locust Creek Ditch
Arkansas

TABLE VIII
ANALYSIS OF GROUP DRAINAGE NEEDS AND COSTS

| Item | Unit : | Amount | : Unit | Total Cost | | | | |
|--|-------------|-----------|-----------------|-------------------|--|--|--|--|
| Excavation 1/ Spreading spoil 1/ Clearing right-of-way 1/ | Cubic Yard: | | Dollars 0.20 | Bollars 22,500 | | | | |
| Right-of-way easements | Acres : | 23 | 30.00 | 690 | | | | |
| Crossings | Each : | 12 | \$ 400.00 | 4,800 | | | | |
| Swinging water gaps | Each | 10 | 50.00 | .500 | | | | |
| Pipe drop structures | Each : | 10 | 200.00 | 2,000 | | | | |
| Flap gates | Each : | 10 | 100.00 | 1,000 | | | | |
| Vegetative plantings | Acres | 45 | 8,00 | 360 | | | | |
| Total construction cost | ; xx ; | XX | \$ XX | 31,850 | | | | |
| Engineering cost | 1 xx 1 | жx | : XX | 3,185 | | | | |
| Contingencies and legal | ; xx ; | ** | t XX | 3,185 | | | | |
| Total installation cost | | | 8 | 38,220 | | | | |
| Annual equivalent - installation cost (amortized for 30 years at 3½ percent) | | | | | | | | |
| Annual maintenance cost | | | | | | | | |
| Annual loss of production - right-of-way 2/ | | | | | | | | |
| Total annual cost of required group facilities | | | | | | | | |
| | | | | | | | | |

These items included in excavation costs under normal contract procedures.

^{2/} Annual loss of production - right-of-way. 12 acres @ \$13.11 per acre.

Basin: Project: State: St. Francis River Locust Creek Ditch Arkansas

SUMMARY OF ANNUAL NET PRODUCTION RETURNS
AND ASSOCIATED COSTS

| and the second s | | · · · | . , |
|--|---|-------------------------------|------------------------------------|
| : (Ca.C | 1) Oka , 191 pangyana em | : Total | (3) Discounted Amount |
| | | Dollars | Dollars |
| 1. Net return w 2. Net return w | ith project ithout project t to project | 380,902 240,887 140,015 | xx xx 86,980 2/ |
| 4. Farm drainag a. Installa b. Maintena c. Total | tion cost | 18,085 20,495 38,580 | xx 2/° xx xx xx 23,967 |
| 5. Group draina a. Installa b. Maintena c. Total | tion cost | 2,078 o no 1,749 | xx 3/ xx xx 3,178 |
| 6. Conversion c a. Installa | tion cost | 11,720 | xx 2/0 |
| b. Maintena c. Total | nce. dost | 11,720 , 10 | 7,281 g - 50 |

Includes loss of production, right-of-way

Discounted at 5 percent to account for estimated 20 year lag
to full installation, maintenance, and benefit accrual.

Jiscounted at 32 percent to account for estimated 10 year lag

Discounted at 32 percent to account for estimated 10 year lag to full installation, maintenance and benefit accrual.

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strift, it as me bouted in the land with

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